

Expert Opinion Letter (Confidential)

Analysis of Positional Requirements for National Interest Waiver

Evaluator: Dr. XYZ, DVM

Evaluator Info: Licensed Veterinarian, American Veterinary Association

AREAS OF EXPERTISE

- Experienced Clinician
- Marine Mammal Medicine
- Emergency Animal Medicine
- Field Research Veterinarian
- Scientific Investigator
- Rescue and Rehabilitative Care
- Project Manager
- Course Instructor
- Data Analysis / Data Management
- Media / Communications
- Necropsy – Life History Lab Mgr.
- Veterinary Systems & Logistics
- Veterinary Education
- Conference and Workshop Planning
- Fundraising and Special Events
- Hospice Care - Grief Management

EMPLOYMENT

- **2003 - present:** Co-investigator, Co-lead veterinarian, NOAA/NOS Health and Environmental Risk Assessment Project, Indian River Lagoon, FL
- **2005 - present:** Licensed Veterinarian – Small Animal Veterinary Relief Services
- **2010 - present:** American Veterinary Association Euthanasia Working Group Member
- **2014 - present:** International Marine Mammal Veterinary Consultant / Special Projects
- **2012 - 2015:** Attending Veterinarian, Vaccine & Gene Therapy Institute of Florida
- **2014 - 2015:** Emergency Clinician, Rockledge Animal Specialty & Emergency Hospital
- **2012 - 2013:** Post-Doctoral Fellowship Student Adviser - Harbor Branch Oceanographic Institute at Florida Atlantic University Boca Raton, FL
- **2011:** Office of Naval Research, Alexandria, VA (grant reviewer)
- **2010 – 2012:** Born Free (UK), Consulting Marine Mammal Veterinarian (Turkey)
- **2009:** Georgia Aquarium, Conference Chair - International Sirenians Conservation
- **2009 - 2014:** Veterinarian of Record, Smithsonian Marine Station, Ft. Pierce, FL
- **2008 - 2014:** NMFS – Veterinary Lead to Marine Mammal Stranding Network SEUS
- **2008 - 2014:** Chief Clinician, Marine Mammal Research and Conservation Program, Harbor Branch Oceanographic Institute at Florida Atlantic University, Fort Pierce, FL
- **2008 - 2014:** Associate Professor, Marine Mammal Medicine Florida Atlantic Univ.
- **2007 - 2010:** Course Coordinator, Biology of Marine Mammals Graduate Course, FAU
- **2007 - 2014:** Institutional Animal Care and Use Committee, Florida Atlantic University
- **2007 - 2014:** Institutional Animal Care and Use Committee (IACUC) Veterinarian, Harbor Branch Oceanographic Institute at Florida Atlantic University
- **2006:** National Marine Fisheries Service - John H Prescott Technical Review Panel
- **2005 - 2007:** Contract Veterinarian - Marine Mammal Research and Conservation Program, Harbor Branch Oceanographic Institute, Ft. Pierce, FL
- **2004 - 2005:** Clinical Veterinary Post- Doctoral Veterinary Fellow- Marine Mammal Research and Conservation Program, Harbor Branch Oceanographic, Fort Pierce, FL
- **2003 - 2005:** Veterinarian and Ultrasonographer, NOAA/NOS Health and Environmental Risk Assessment Project, Charleston, SC
- **NOAA Fisheries / U.S. National Marine Fisheries Service (NMFS) Authorization 2003 to Present –** Conducted (16) bottlenose dolphin health and environmental risk assessment (HERA) projects, involving the

sampling and surveillance of more than (400) individual dolphins. Currently serves under NOAA/NMFS special authorization.

EDUCATION

- **1995 - 1999:** Auburn University - Bachelor of Science, Zoology
- **1999 - 2003:** Auburn University - Doctor of Veterinary Medicine
- **2001:** Aquatic Animal Veterinary Internship: Dolphin Quest Hawaii, Sea Life Park Hawaii
- **2000/2001:** Small Animal Veterinary Externship: Angel Memorial Animal Hospital, MA.
- **2003:** Aquatic Animal Veterinary Preceptorship Training: Shedd Aquarium, Chicago, Ill
- **2003:** Denver Zoo/Alameda East Veterinary Hospital externship- Denver, CO
- **2004 - 2005:** Veterinary Post-Doctoral Fellowship Harbor Branch Oceanographic Institution / Division of Marine Mammal Research and Conservation
- **2012:** Chi Institute of Traditional Chinese Veterinary Medicine Reddick, FL

OTHER PROFESSIONAL EXPERIENCE

- Born Free: International Veterinary and Animal Welfare Consultant (Turkey)
- Merlin Entertainment: Veterinary and Animal Welfare Consultant (China)
- Sony Pictures: Veterinary and Animal Welfare Consultant (Canada)
- Dolphin Tale I & 2 - Feature Film / Research Advisory Committee; Alcon Inc.
- PBS 'Emmy Award Winning' Changing Seas Documentary / Featured
- ABC Nightline: Featured Guest - Jungle Marathon 2011
- Envirovet - Course Organizer and Instructor
- Marvet - Course Organizer and Instructor
- ABC Sea Rescue: Featured Guest - Marine Mammal Rescue Episodes
- AquaKids Nationally Broadcast Programming: Scientific Advisor FL
- Invited Speaker and Featured Guest Girls in Ocean Science; Ocean Institute CA

Dear USCIS,

I write this letter on behalf of Fulano in support of her application for a National Interest Waiver to advance her proposed endeavor in the field of animal science. I strongly support her plans to provide her services to the U.S. biology and education sector and it is in the best interest of the United States to waive the job offer and labor certification.

I am providing this opinion letter based on my experience as a professor and an expert in the fields of biology and other related areas.

With regard to my academic background, I completed Bachelor of Arts with a Major in Biology and Minor Chemistry. I also hold a Master of Science Degree in Molecular Biology/DNA Technology from Montclair State University in New Jersey. I have a Ph.D. in Biomedical Sciences with Concentration in Molecular Biology from the University of Medicine and Dentistry of New Jersey.

As an evaluator, I am responsible for reviewing academic and experiential qualifications to form part of a candidate's credential evaluation report, providing a detailed analysis of the academic background and occupational experience that a person has received outside the United States. With my range of experience, I am well positioned to issue opinions regarding positional requirements of roles such as of a MicroResearch Scientist.

Throughout the years of my professional practice, I have become extensively familiar with the nature and depth of knowledge and skill, both theoretical and practical, gained by university students who study biology or other related degrees, and how that knowledge and skill is recruited and applied in a diverse operating environment across the fields of life science, biology, anatomy, bioethics, health, environment conservation, biochemistry etc. I possess about five years of experience teaching laboratory and academics to a variety of students. Based on these experiences, I believe that I am qualified to issue an opinion regarding the requirements for the subject position of life science, biology and other related areas.

Throughout the remainder of this letter, I will provide an analysis and advisory evaluation of her exceptional ability and eligibility for a National Interest Waiver.

According to USCIS, The United States Citizenship and Immigration Services (USCIS) uses the following three prong system requirements for a National Interest Waiver.

- **Requirement 1** - *The foreign national's proposed endeavor has both substantial merit and national importance.*
- **Requirement 2** - *The foreign national is well-positioned to advance the proposed endeavor.*
- **Requirement 3** - *It would be beneficial to the United States to waive the job offer and labor certification requirements.*

REQUIREMENT 1

The foreign national's proposed endeavor has both substantial merit and national importance.

As discussed herein, I find that Fulana meets the three requirements set forth by the USCIS to evaluate national interest requests. In my opinion, it is clearly in the national interest of the United States to grant her a National Interest Waiver, given her impressive record of achievements as a Research Scientist.

She specializes in the zoology field with expertise in developing scientific research in the comprehensive areas of quantitative genetics and statistical analysis. Her work is in demand and has national importance in the science industry. Through her exceptional track record of experience as a Research Scientist, she has demonstrated that she is fully capable and well positioned to advance the proposed endeavor related to the field of animal science, animal breeding, quantitative analyses, breeding value estimation, genomic selection, and data management.

Her proposed endeavor of providing her expert knowledge and skills in the science discipline of zoology in the U.S. has both substantial merit and national importance in the science industry. Generally, research scientists design, undertake, and analyze information from controlled laboratory-based investigators, experiments, and trials.

Upon being granted permanent residency, Fulana will continue to develop her revolutionary research in the area of genetics by environment by management interactions. Her vast experience and in-depth knowledge in agriculture science research enable her to streamline and accelerate projects that involve the genomics, molecular and systems biology. Ultimately, she will contribute to the U.S. bioscience discipline by further developing genetics and breeding programs.

Her unrivaled expertise in zoology is of national importance, and even global importance. Animal breeding, genetics, and genomics is the branch of science concerned with maximizing desirable genetic traits, such as producing animals that have leaner meat. Animal geneticists have identified elements within genes that can enhance animal growth, health, and ability to utilize nutrients. These genetic advances can increase production while reducing environmental impacts.

Animals and livestock contribute 40 percent of the global value of agricultural output and contribute to the livelihoods and food security of almost a billion people worldwide (U.S. Department of Agriculture).

Advances in animal breeding, genetics, and genomics are facilitating a more efficient industry. For example, the number of cattle has decreased over the past decade, yet the total production of beef and milk has increased. This was largely possible because genetic advancements led better animal feed efficiency, which is critical to improving livestock production and lowering costs for producers. Agriculture plays a valuable role in our everyday lives by not only providing us with food, but also by maintaining a strong economy. On a worldwide basis, more people are in some way involved in agriculture than in all other occupations combined. Agriculture is America's largest industry—not computers or cars or entertainment—employing more than 20 million people in agriculture-related jobs.

In addition to providing an abundant food supply for domestic markets, U.S. agriculture exports crops to countries around the globe. Trade is essential to the U.S. agricultural sector, with earnings from U.S. agricultural exports accounting for 20 to 30 percent of total farm income. Almost \$60 billion of American agricultural products are exported. As the population increases in the U.S. and throughout the world, there is an even greater demand for the food produced in the United States.

Animal agriculture in the U.S. accounts for a significant segment of U.S. agriculture. It includes aquaculture, beef, dairy, goats, poultry, sheep, and swine. According to the USDA's Economic Research Service (ERS), animal products account for the majority (51 percent) of the value of U.S. agricultural products, exceeding \$100 billion per year.

Advances in animal breeding, genetics, and health have increased the quality and quantity of animal protein available to consumers. The per capita U.S. consumption of beef, pork, broiler, and turkey meat combined has risen from about 127 pounds in 1950 to more than 223 pounds in 2020 (Statista).

The U.S. has the largest feed-cattle industry in the world and is the world's largest producer of beef. Among livestock industries, milk has a farm value of production second only to beef. The U.S. is also the world's third largest producer and second largest consumer, exporter, and importer of pork and pork products. The U.S. poultry industry is the world's largest producer and second largest exporter of poultry meat.

A study released in 2018 at the BIO International Convention shows that the U.S. bioscience industry has reached \$2 trillion in annual economic impact while maintaining accelerated venture capital investment and job growth numbers. Among U.S. technology sectors, the bioscience industry has held a leading position as an economic driver and job generator.

The report, *Investment, Innovation and Job Creation in a Growing U.S. Bioscience Industry 2018*, finds U.S. bioscience firms directly employ 1.74 million people, a figure that includes more than 273,000 high-paying jobs created since 2001. The average annual wage for a U.S. bioscience worker reached \$98,961 in 2016.

These earnings are more than \$45,000 greater, on average, than

the overall U.S. private sector wage. The report further shows that since 2014, the bioscience industry has grown by 4.4 percent with four of its five major subsectors contributing to this overall job gain.

The study of biology impacts our everyday lives. Knowledge acquired through research further edify health studies, including virology, pathology, and immunology, and in treating and preventing diseases. It provides us with knowledge of how our body works and what we can do to help it run efficiently, thus contributing to information related to nutrition and exercise. Moreover, Research Scientists and their work lead to vital biological discoveries in relation to animals, humans, and other living organisms.

Therefore, Fulana, with extensive experience in the field of agriculture science has the capability to render services in the discipline area of zoology in the United States.

In the context above, the United States would greatly benefit from the expertise and skills of an experienced Research Scientist such as Fulana, who has extensive knowledge and expertise in the animal science sector. Her work has both substantial merit and national importance for the United States.

REQUIREMENT 2

The foreign national is well-positioned to advance the proposed endeavor.

Fulana is a Professional on the basis of her academic background and 5 years of experience in the area of animal breeding and genetics.

She earned a Bachelor's Degree in Zootechnics and a Master of Zootechnics from Universidade XXXXXX, as well as a Doctor of Zootechnics from the Federal University of YYYYYY located in the Federative Republic of Brazil.

In 2014, she was a Lecturer at the Federal University ZZZZZZZ. In this capacity, she taught courses such as Basic Animal Breeding, Basic Genetics, Type Traits for Domestic Animals, and Advanced Animal Breeding. She also supervised undergraduate students in the areas of milk quality, beef cattle reproduction and animal nutrition. During this time, she published three papers and 13 articles in proceedings, three of them which received a grant related to academic relevance within the Agriculture Science Institute at UFMG.

From 2016 to 2017, Fulana was a Post-Doctoral Research Fellow at the University of RRRR. She incorporated novel approaches to scientific investigations by adapting and developing original concepts and ideas for new and existing research on genomics, molecular, and systems biology with a focus on reproduction in mammals.

Thereafter, from 2017 to 2018, she was employed at the BLABLABLA – Agriculture & Food Business Unit as a Post-Doctoral Research Fellow. There, she incorporated novel approaches to scientific investigations by adapting and developing original concepts for new and existing research focused on quantitative and genomics genetic evaluation of beef cattle. She also shared scientific results to maintaining and strengthening collaborations with other research groups and farmers through publication of high-impact scientific papers. Since 2018, she has been a Research Scientist at the XXXXXXX. As such, she analyzes quantitative genetic data sets, incorporates new approaches to scientific investigations, and contributes to the design of breeding programs involving quantitative genetic data. She also assists with data management, produces high quality scientific papers suitable for publication in quality journals, and works effectively as part of a multi-disciplinary research team to undertake independent scientific investigations. Furthermore, she provides

coaching and on-the-job training to technical staff and students to ensure experiments are established in accordance with research design.

Due to her groundbreaking achievements, Fulana has received:

- 2017 Annual Thesis Award at Federal University XXXXXXXX. Thesis prize within Veterinary School. “Implications of genotype x environmental interaction in beef cattle selection”
- 2016 Fellowship from the ZZZZZZ – Brazilian Founding Institute)
- 2012 Fellowship from the YYYYYYYY – Brazilian Founding Institute)
- 2010 Fellowship from the CCCCCC – Brazilian Founding Institute)

She has attended numerous conferences to present articles and has published the following peer-reviewed papers:

- Paper1 Journal of Animal Science.
- Paper 2 Genetics Selection Evolution.
- Paper 3 Livestock Science.
- Paper 4 Journal of Animal Science.
- Paper 5 Journal of Animal Science.
- Paper 6 Journal of Dairy Science.
- Paper 7 Animal Genetics.
- Paper 8 Animal Feed Science and Technology.
- Paper 9 Revista Brasileira de Zootecnia, 46:309-316.
- Paper 10 Journal of Veterinary Science & Technology, 8:438.
- Paper 11 Aquaculture, 460:98-104.
- Paper 12 Archivos de Zootecnia (in Portuguese).
- Paper 13 Revista Brasileira de Saude e Producao Animal (in Portuguese).
- Paper 14 Genetics Selection Evolution, 48:85.

Testimonials and documentary evidence provided demonstrate that she has a record of notable success, as she has had a leading role in defining projects, especially those related to agriculture science. The record shows that Fulana’s initiatives and unique approach have been essential for these projects’ success.

Beltrana, DVM, MSc, PhD, Advanced XXX Research Fellow at the University of xxx, states:

“In 2019, collaborative research by a, b and c, led by Dr. Fulana, resulted in a scholarship award. This project concerns beef cattle genetics, tick resistance and reproductive traits. The project’s preliminary results will be published in a short paper, which was accepted to oral presentation at 6th International Conference of Quantitative Genetics, zz, 2021. Dr. Fulana is a great professional, who collaborates with her peers to advance livestock research in blabla.”

bELTRANA, PhD, Professor at the State University fffff, states:

“Dr. Fulana original research contributions has been published in more than 100 papers and proceedings, including 22 peer reviewed journal publications with more than 90 citations. In conclusion, Dr. Fulana do has demonstrated extraordinary ability to performance scientific task.”

Fulano, Senior Research Scientist at the aaaaa, states:

“Looking Dr Fulana’s recent track record, it is worth noting that she is a highly productive scientist. We have co-authored five peer-reviewed scientific publications. Additionally, we co-authored six short-publications, three in an international and three in a trans-Tasman conference.”

Fulano, Associated IV Professor at uuuuuu, states:

“Our collaboration is ongoing, and Dr. Fulana has collaborated as a panel member of PhD and Master degree research projects in quantitative genetics and applied breeding, her expertise field. Looking at Dr Fulana’s recent track record, it is worth noting that she is a highly productive scientist with 22 peer reviewed paper and 90 citations available on google scholar in the last four years.”

Beltrana, Professor at the Federal TTTTT, states:

“Dr. Fulana published her original research contributions, more than 20 papers, in major peer reviewed journals which is an extraordinary number considering her young research career. In conclusion, Dr. Fulanas’s strong knowledge and distinguished expertise in Animals Science specially with Applied Quantitative Genetics field goes far beyond the skills of ordinary peers with same education in this field.”

The foregoing clearly shows that Fulana has worked in critical professional and managerial capacities in the fields of science and education in hhh and gggg. She is a remarkable Research Scientist with an intimate and first-hand knowledge in the field of animal science who has made major contributions to the organizations in which she has been employed in the past.

Through her world class education and hands on work experience, achievements and expertise in her field, she has demonstrated that she is fully capable and well positioned to advance the proposed endeavor.

REQUIREMENT 3

It would be beneficial to the United States to waive the job offer and labor certification requirements.

The labor certification process is designed to protect the national interests of the United States by ensuring that the wages and working conditions of U.S. workers employed in the beneficiary's field would not be adversely impacted. The fields of Fulana can be defined as the field of zoology. She possesses first-rate expertise and skills in the area of animal breeding and genetics.

In reality, she is not competing against US based research scientists, since her expertise is rare. The United States has the opportunity to directly benefit from the intimate knowledge and extensive experience that she has as a Research Scientist.

Her expertise is in the areas of agriculture science. In this regard, the expertise of Fulana is unique in the United States and, therefore invaluable for U.S. institutions specializing in the genetics and breeding sector. She has the potential to make crucial and revolutionary contributions in the field of animal science, which is of intrinsic merit in the United States’ fundamental interests. Therefore, the work of Fulana as a Research Scientist for U.S. companies would neither displace other research scientists in the United States nor adversely impact the wages and working conditions of U.S. workers in the health sector.

The size of STEM (science, technology, engineering, and math) workers range from 5 to 20 percent of all U.S. workers. STEM refers to the science, engineering, mathematics, and information technology domain detailed by the Standard Occupation Classification Policy Committee but excluding managerial and sales occupations. Postsecondary teachers in STEM fields and lab technicians are considered STEM workers, but workers in skilled trades, such as machinists, are not.

Numerous reports detail the growing concern of policymakers and industry leaders regarding a shortage in the STEM workforce believed necessary to sustain the U.S. innovation enterprise, global competitiveness, and national security. Demand for STEM skills also exists below the bachelor’s level. The shortage affects various industries, with the manufacturing sector alone predicted to need about 3.5 million jobs by 2025 -- but up to 2 million of these positions might go unfilled due to the difficulty of finding qualified workers. Scientists and engineers are widely believed to be essential to U.S. technological leadership, innovation, manufacturing, and services, and thus vital to U.S. economic strength, national defense, and other societal needs.

Given her vast experience, she is well-qualified to train other U.S. professionals in the related field. She holds a Doctor in Zootechnics and has been widely recognized by other professionals for her contributions to the

field of science. She also has a strong background in developing scientific research in the comprehensive areas of genomics, molecular and systems biology.

Furthermore, the implicit opportunity cost of not allowing Fulana to reside in the United States in order to allow U.S. institutions to benefit from her skills and professional experience can be sizable in terms foregone job creation and provision of professional advice.

In summary, waiving the job offer and labor certification requirements for Fulana is in the national interest of the United States.

CONCLUSION

It is my opinion that Fulana meets the following three requirements set forth by the USCIS to evaluate requests for National Interest Waiver. The aforementioned requirements are:

- **Requirement 1** - *The foreign national's proposed endeavor has both substantial merit and national importance.*
- **Requirement 2** - *The foreign national is well-positioned to advance the proposed endeavor.*
- **Requirement 3** - *It would be beneficial to the United States to waive the job offer and labor certification requirements.*

She has demonstrated a remarkable record of specific achievements as a Research Scientist with an intimate and sophisticated knowledge in the disciplinary area of life science, which is clearly indicative of future benefits to the national interest of the United States.

There are substantial economic benefits for the United States associated with waiving the job offer and labor certification requirements for her, in terms of her activity and job creation that outweigh the national interests in the labor certification process.

Taken together, the evidence demonstrates that it is beneficial to the United States to grant her a National Interest Waiver, given her professional experience in the field of zoology as well as her intimate knowledge and experience in scientific research.

The foregoing is an analysis and advisory evaluation of Fulana's request for a National Interest Waiver based on documents provided by her as well as information based on my own research. The documents are represented to be authentic and true copies of the original documents.

To the best of my knowledge, I have no reason to doubt the authenticity and accuracy of these documents.

Please feel free to contact me if you have any questions or concerns.

Sincerely,

Dr. ffffff, DVM,

Licensed Veterinarian, American Veterinary Association

August 3, 2020

References

1. <https://www.bio.org/events/bio-international-convention/navigate>
2. https://www.bio.org/value-bioscience-innovation-growing-jobs-and-improving-quality-life-2018?_ga=2.248954439.1716107455.1582584738-716279578.1582584738
3. <https://www.bls.gov/opub/mlr/2015/article/stem-crisis-or-stem-surplus-yes-and-yes.htm>
4. <https://www.emerson.com/en-us/news/corporate/2018-stem-survey>
5. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4380149/>
6. <https://www.agweek.com/tags/livestock>
7. <https://nifa.usda.gov/topic/animal-breeding>
8. <https://www.ers.usda.gov/topics/animal-products/>
9. <https://www.statista.com/statistics/189222/average-meat-consumption-in-the-us-by-sort/>