

United States Pharmacopeial Convention Research Fellowship Awards

Grantor: United States Pharmacopeial Convention

Closes: 5/25/2012

Maximum: \$50,000.00

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Mail completed applications by May 25, 2012

Three awards at \$50,000

The USP Research Fellowship Awards will be presented to the students whose proposed research directly address specific USP scientific or research needs. This program offers up to three years of funding. Applicants must ensure that their research topic is in close alignment to USP research priorities as detailed below.

Eligibility

Applicants for the USP Research Fellowship Awards must

Have been accepted for full-time study in a Ph.D. or Pharm.D. program or medical or dental school;

Have been accepted to a Fellowship Program; or

Have been awarded a postdoctoral research (non-faculty) appointment.

Non-U.S. applicants must have a background in standards and currently be enrolled in an equivalent educational program. International students must possess the appropriate visa required to participate in the Research Fellows Program. USP will not assist students to obtain a visa for this purpose. USP may require proof of visa status as a condition of offering a Research Fellowship to a student.

The USP Research Fellowship Awards allow for subsequent year's funding; however, second awards are not automatic. Applications for continued funding must include a progress report on the research up to the time of application.

Application Process

Each application must include:

A completed application form signed by the applicant, a faculty advisor, and a university official

A curriculum vitae and transcript

A progress report on the research if application is for second-year funding

A research proposal

Post-Award Requirements/Institutional Commitment

Resulting publications and/or theses must acknowledge USP financial support, and a copy must be provided to USP for retention. A report on the research accomplishments must be provided by the Research Fellows no later than three months following the end of the funding period. The Research Fellows are required to meet with USP staff at the USP Headquarters in Rockville, Maryland at the start of the funding period. USP will arrange and cover travel costs for this meeting. The Research Fellows are also required to give a poster presentation at a USP-sponsored meeting or event, up to December 30, 2013.

The USP Research Fellows will be required to work closely with the assigned USP staff to ensure alignment with USP priorities. This will include quarterly meetings by telephone or web with assigned USP staff, the meeting with USP staff at the USP Headquarters at the start of the funding period, and a meeting with USP staff at a USP-sponsored meeting or event.

As fiscal agents for the Research Fellows, the institutions receive funds and must provide USP with a summary of expenditures at the end of the annual period. The institutions must agree that funds will not be used to pay overhead or administrative expenses. Awards are to support the Research Fellows and the costs of the research as submitted by the Research Fellows and approved by a selection committee. Most of the award should be used as a stipend for the Fellows in accordance with the policies of the institution. The remainder may be used for tuition, travel, research, clerical help, or equipment necessary to carry out the purpose of the award. No portion of the award may be used for teaching, other research, or other services of a part-time nature unless these components are a condition for the degree.

Selection Process

Applications are reviewed by USP internal selection group composed of Documentary Standards and Reference Standards Vice Presidents.

Each proposal's significance is ranked on how closely it addresses a specific area of USP research need.

Research Priorities

USP scientific staff has identified a number of areas in which USP could benefit from research assistance. USP Research Fellowship applicants are encouraged to choose one of these topics on which to focus their research.

General Research

Flow Cytometry in Biological applications that could lead to General Chapter additions/improvements and/or methods for monograph use
Particle Characterization Technologies that could lead to General Chapter additions/improvements and/or methods for monograph use, characterization of particle morphology and composition

Particle Characterization Technologies that could lead to General Chapter additions/improvements and/or methods for monograph use; relationships with "experts" in the area that our lab folks could collaborate/leverage/learn from; and

evaluation of students for potential fit as USP hires in the lab (i.e. talent recruiting)

Field Portable Spectroscopic Techniques combined with Chemometric approaches for counterfeit detection

Single instrument/measurement approaches to chemical ID and quantitation of materials for food ingredient reference standards (i.e. low cost food ingredient reference materials/standards)

Creation of new topical/dermal dosage formulations as use for reference materials suitable for In Vitro apparatus performance verification testing

Small Molecules

Modernization of monographs (analytical methods); assessment and prioritization of needs, implementation

Modernization of monographs—method development and validation (replacing titration with HPLC or replacing wet chemistry procedures with chromatography or other instrumental techniques)

Biologics and Biotechnology

Modernization of monographs (analytical methods); assessment and prioritization of needs, implementation

Purity assessment (protein concentration determination assays)

Methods to revise the protein content determination and purity assessment

Use of molecular biology techniques for species identification for wheat or other food-based components

Excipients

Modernization of monographs (analytical methods); assessment and prioritization of needs, implementation

Development of rheological methods for the effective characterization for excipients, HPMC

Molecular weight distribution determination for water soluble polymeric excipients by SEC/MALDI

Advanced macromolecular excipient characterization to decrease variability in USP standards

New methods to differentiate excipients

Detection of counterfeit drugs through excipient characterization

Comparison of analytical techniques for solid excipients/USP standards

Development and validation of authentication/identification and quantitative assay/purity methods that can discriminate adulterated from non-adulterated materials for protein-based food ingredients

Dietary Supplements

Modernization of monographs (analytical methods); assessment and prioritization of needs, implementation

Development of dissolution tests for fat-soluble vitamins in dietary supplement dosage forms

Development of supplemental information for articles of botanical origin to facilitate compendial compliance (expansion

of General Chapter <2030> Supplemental Information for Articles of Botanical Origin)

Development of non-traditional dissolution tests for water-soluble vitamins and minerals in soft gel formulations containing dietary oils and oily excipients

Food Ingredients

Modernization of analytical methods; assessment and prioritization of needs, implementation

Modernization of analytical methods (development and validation for the following FCC monographs:

Caramel (Quantitative impurity tests and reference standards for 4-Methylimidazole and

2-Acetyl-4(5)-tetrahydroxybutylimidazole (THI)

Tartaric Acid (identification and assay methods that can distinguish D- from L-tartaric acid)

Phosphate-based food ingredients (ion chromatographic methods for the identification and quantification of these food ingredients to replace existing wet-chemistry methods)

Development and validation of analytical methods to assess the quality and safety of any nanotechnology derived food ingredient(s)

Strategic assessment of strengths and weaknesses for using the FCC for compliance with food quality systems (ISO, industry systems, etc)

Strategic analysis of cooperation opportunities with other food standards organizations (analysis of scientific and trade associations, overlap, synergies and opportunities)

Development and validation of a predictive model to help identify food ingredients susceptible to economically motivated adulteration

Link: <http://www.usp.org/aboutUSP/careers/uspResearchFellowshipAward.html>