

2006 Career Awards in the Biomedical Sciences

In Honor of Gertrude B. Elion and George H. Hitchings

*Providing U.S. and Canadian Scientists with Bridging Support for
Advanced Postdoctoral Training and Initial Faculty Years*

*Some Awards Are Intended to Support Postdoctoral Training
in the United Kingdom*

Application Deadline: October 3, 2005

BURROUGHS
WELLCOME
FUND 

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Note change to postdoctoral eligibility criteria on page 2.

Please note: Beginning with the 2007 award cycle (application deadline October 2, 2006) all applications for BWF’s Career Awards must be submitted electronically. Please check BWF’s website (www.bwfund.org) for future announcements.

PROGRAM BACKGROUND

The Burroughs Wellcome Fund’s (BWF) Career Awards in the Biomedical Sciences (CABS) are intended to foster the development and productivity of early-career biomedical researchers and help them make the critical transition to becoming independent investigators. The CABS grant is made to an investigator’s institution on behalf of the individual investigator or BWF CABS awardee.

Since the program began in 1995, BWF has awarded more than \$100 million to 195 early career scientists at more than 40 U.S. and Canadian institutions. In the past decade, 40 percent of the awards have gone to physician-scientists, 32 percent to women, 6 percent to Canadians, and 20 percent to minorities, 4 percent of that 20 percent to underrepresented minorities. For 2005, BWF received 173 applications and will make 20 awards, for an award rate of 12 percent.

Of the awardees who have become eligible for faculty appointments, 98 percent have received tenure-track or equivalent positions. BWF expects that by the end of their award, awardees will be engaged in productive research programs and will be able to compete effectively for support from government and other sources. Information about CABS program outcomes can be found in Pion and Ionescu-Pioggia, published in *Acad.Med.* 2003; 78: 177-186.

The awards are made in honor of two pioneering scientists and Nobel prize-winners who played major roles in the Burroughs Wellcome Fund’s history—Gertrude B. Elion (1918-1999) and George H. Hitchings (1905-1998).

For this award year, BWF will make at least 20 awards. Although BWF aims for a 50:50 split of awards between researchers with a Ph.D. degree and researchers with an M.D. or M.D.-Ph.D. degree, this is not a requirement. All awards are based on merit. (References to “M.D.” and “Ph.D.” include all types of medical and scientific doctoral degrees.) The Fund encourages applications from institutions that have never nominated candidates, as well as from institutions that have applied previously but whose candidates have not been selected to receive an award.

PROGRAM

Career Awards in the Biomedical Sciences provide \$500,000 over five years to bridge advanced postdoctoral training and the early years of faculty service.

General requirements:

- Researchers interested in applying may be working in any of the basic biomedical sciences.
- During the postdoctoral period, awardees may train at degree-granting institutions in the United States, Canada, or the United Kingdom.
- All faculty positions must be taken at U.S. or Canadian degree-granting institutions.
- During the award period, at least 80 percent of the awardee’s time must be devoted to research-related activities.

The postdoctoral portion of the award:

- Should last a minimum of one and a maximum of two years.
- Allows the awardee to use up to \$116,000, or \$58,000 of the award per year.
- Allows maximum salary support of \$44,000 in the first year and \$47,000 in the second year; however, BWF expects that support must meet or exceed the NRSA scale appropriate to the trainee’s level.
- Averages 15 months, based on historical data from all awardees.

The faculty portion of the award:

- Will be \$500,000 minus the portion used during the postdoctoral years.
- Allows the awardee maximum salary support of \$54,000 in the first year, \$59,000 in the second year, and \$65,000 for subsequent years. The balance is to be used for research expenses.
- Provides that the maximum tenure for the faculty portion of the award will be five years minus the time spent in the postdoctoral appointment.

For example, support for five years with two years of postdoctoral training would be:

Postdoctoral Period	Salary and Research	Administrative Fee	Annual Total
Year 1	\$53,360	\$4,640	\$58,000
Year 2	\$53,360	\$4,640	\$58,000
Faculty Period			
Year 3	\$117,760	\$10,240	\$128,000
Year 4	\$117,760	\$10,240	\$128,000
Year 5	\$117,760	\$10,240	\$128,000

GUIDELINES

- If an institution's salary scale for the position is higher than the salary amounts provided by the award, then the institution must supplement the awardee's salary. (In most cases, the institution has paid all or part of the awardee's salary, enabling more of BWF's support to be allocated for research expenses.)
- BWF will pay an administrative fee of 8 percent to the institution to cover the awardee's fringe benefits, such as health insurance and retirement.
- Institutions that pay for fringe benefits from their own funds may keep the fee as reimbursement for administering the grant or reallocate the fee to the investigator's research expenses.

Faculty Appointments

- If an awardee moves to a faculty position within two years, the balance of the postdoctoral portion of the award will be transferred to the faculty institution and added to the faculty portion of the award.
- Before awardees may begin the faculty portion of their award, BWF requires institutions to make a significant commitment to their career development.
- BWF strongly prefers tenure-track appointments, accompanied by salary support or support for starting a laboratory, or both.
- If the appointment is non-tenure track, the degree-granting institution must provide salary support or support for starting a laboratory, or preferably both.
- BWF reserves the right to terminate awards if the institutional commitment is deemed inadequate.
- If an awardee chooses to accept a faculty position at a research institute, the research institute must be closely affiliated with a degree granting institution, and the degree granting institution must offer the awardee a joint tenure track faculty position with some financial or similar commitment to the awardee.

The deadline for receipt of all application materials by BWF is October 3, 2005. BWF will interview finalists and will notify them in late February 2006 about interviews, which will be conducted March 21-23, 2006. The awards will be announced in May and will begin on September 1, 2006. No exceptions will be made to the starting date.

Consult BWF's website at www.bwffund.org for any program updates and answers to frequently asked questions.

Candidate Eligibility Guidelines

- Candidates must have completed at least **12 months but not more than 48 months** of postdoctoral research training by the October 3 application deadline.
No exceptions to this requirement will be made. (Please note: BWF announced last year that for the 2006 awards, candidates could not have more than 36 months of postdoctoral training by the application deadline; however, BWF has decided that the postdoctoral eligibility requirements will remain the same as in previous years.)
- For candidates with an M.D. degree, postdoctoral training excludes clinically oriented residencies that do not contain a major research component. The portion of a residency that has a major research component should be noted and added to the months of postdoctoral training.
- Researchers who hold a faculty appointment as an assistant professor or the equivalent, or who are in negotiations for or know they will receive such an appointment within a year of the application deadline, **are not eligible.**
- Candidates must be nominated by accredited, degree-granting institutions in the United States, Canada, or the United Kingdom.
- Candidates must be citizens or permanent residents of the United States or Canada at the time of application.
- Candidates must provide documentation of permanent resident status with the application.
- Permanent residents of the United States must provide a copy of their Alien Registration card (green card).
- Permanent residents of Canada must provide a copy of their Landed Immigrant Status form.
- Persons who have applied for permanent resident status but have not received their government documentation by the time of application **are not eligible.**

Institutional Nomination Guidelines

- A U.S. or Canadian institution—including its medical school, graduate schools, and all affiliated hospitals and research institutes—**may nominate up to six candidates.** Institutions that nominate at least one candidate in the reproductive sciences **may nominate an additional candidate.** BWF believes that diversity within the scientific community enhances the well being of the research enterprise and consequently encourages nominations on behalf of individuals from underrepresented minority groups. Therefore, institutions that nominate at least one candidate from an underrepresented minority group—African-American, Hispanic, or Native American—**may nominate an additional candidate.**

APPLICATION INSTRUCTIONS

- To encourage more applications from physician-scientists, BWF will allow an institution that nominates at least three physician-scientists to nominate an additional two physician-scientists, bringing to 10 the maximum number of candidates an institution can nominate—six nominations plus an additional nomination for an underrepresented minority, a candidate who works in the area of reproductive health, and two additional physician-scientists if three already have been nominated.
- A degree-granting U.K. institution—including its medical school, graduate schools, and all affiliated hospitals and research institutes—may nominate up to two candidates. Postdoctoral fellows who already are training in the United Kingdom are eligible to be nominated, but they cannot have completed more than 24 months of postdoctoral work outside of the United States or Canada by the application deadline.
- The U.S. National Institutes of Health may nominate candidates who intend to continue their postdoctoral training at the NIH, but such awardees must move to a degree-granting institution to assume a faculty position. The NIH will support these awardees during the postdoctoral years, and BWF will support them for the first three years of their faculty appointment. Their total award will be \$384,000. Postdoctoral fellows at the NIH should contact its Office of Intramural Studies for information about its nomination procedures.
- BWF encourages institutions to nominate approximately equal numbers of male and female candidates and to nominate graduates of M.D. and M.D.-Ph.D. programs. BWF would particularly like to receive more applications from women candidates.
- BWF encourages institutions to nominate individuals in the area of bioinformatics. If your proposal is in this area, please contact BWF.

SELECTION

The advisory committee (listed on p. 6) will review applications, interview candidates, and make recommendations for approval to the Fund's board of directors. BWF does not provide critiques of unfunded proposals. Candidates who are not selected may be renominated in later years, provided they still meet the eligibility requirements.

1. Application form

You should complete your application forms on-line (www.bwffund.org). (If you do not have Internet access, you can obtain printed application forms by contacting BWF at (919) 991-5100.) Once you have completed the forms, before submission, they must be printed and signed by the sponsoring department chair or dean and the institutional official responsible for the sponsored program. You must mail one original completed and signed application form (and 25 copies) to BWF with your application package.

As noted above, candidates who are not citizens of the United States or Canada must provide documentation of their visa status. Permanent residents must provide a copy of their Alien Registration card (green card) for the United States, or their Landed Immigrant Status form for Canada.

2. Curriculum vitae (no more than three pages)

When preparing a CV for this application, include only those items that are relevant to your qualifications for this award. Use the categories listed below as a general outline. Within each category, order all information from present to past. For education and postdoctoral training, provide the name and location of the institution, the dates of study or training, and degrees conferred.

- A. Name and position title
- B. Education
- C. Doctoral and postdoctoral research
- D. Grants and fellowships (include terms still in effect)
- E. Professional associations
- F. Honors
- G. Bibliography (papers published and in press)

3. Candidate's personal statement

In a brief paragraph, describe your activities and interests outside of science to give the advisory committee a sense of your individuality beyond your scientific accomplishments.

4. Proposal summary (no more than two pages)

Prepare a one-page abstract that describes the proposed work and summarizes past research. Write the abstract so that a multidisciplinary group of scientific reviewers are able to understand it. In addition, prepare a one-page lay-language description of the proposed research. Take care to develop a well-articulated lay summary that the educated general public can comprehend. BWF believes in the value of clear communications and considers the lay summary to be an important part of the application.

5. Research plan (no more than six pages, not including references or glossary)

In the order listed below, the plan should describe:

- A. Scope and significance of the postdoctoral research (three pages)
- B. Work planned for the faculty years (two pages)
- C. Career objectives, including how the award will help achieve these objectives (one page)
- D. Glossary, for proposals that contain discipline-specific abbreviations not explained in the research description. The glossary, which should be brief, does not count toward the six-page limit

6. Reprints

Provide up to three publications or manuscripts accepted for publication (26 copies) that demonstrate relevant research accomplishments. If you submit manuscripts, BWF prefers double-sided copies. If you intend to begin the award in the United Kingdom, the U.K. faculty sponsor must provide 26 copies of one publication representing research in the area in which you will work.

7. Letters of support

A. Faculty sponsor. The faculty member under whom you will work should describe your qualifications and potential for contributing significantly to basic medical science. The letter should also describe the research environment in which you will work, the number of graduate students and postdoctoral fellows in the sponsor's laboratory, and the supporting services to be provided by the institution. If you begin the award in the United Kingdom and plan to use animals in the research, the U.K. faculty sponsor must also include in this section a copy of the animal-use permit.

B. Graduate advisor and/or chief of service. Candidates who hold a Ph.D. degree should provide a supporting letter from the individual with whom they took the degree. Candidates who hold an M.D. degree and who have had residency training should provide a supporting letter from the chief of service or another close mentor in the training area. Candidates who hold an M.D.-Ph.D. degree should provide both types of letters.

Faculty sponsor and graduate advisor letters (the original and 25 copies) should be included with the application.

C. Additional letters of support. You must arrange to have letters from no more than two additional faculty members who know your work well sent directly to BWF. Letters of support are intended to be confidential, and the applicant is not to review them. These letters may be included with the application in a sealed envelope. Alternatively, referees may send the original letter and 25 copies by express courier to: Burroughs Wellcome Fund, 21 T.W. Alexander Drive, Research Triangle Park, N.C. 27709. **All letters must be received by 4 p.m. on October 3, 2005. No faxes will be accepted. (For mailing and courier addresses, see box on p. 5.)**

TERMS

Awards are made to institutions on behalf of the awardees. The institutions are responsible for disbursing the funds and for maintaining adequate supporting records and receipts of expenditures. Indirect costs may not be charged against the awards.

Awardees must provide BWF with an annual progress report detailing scientific progress. Institutions must provide an annual financial report. Both reports must be submitted (on forms that will be provided) by November first of each award year. Continued funding will depend on the favorable review of these reports by BWF and its program advisory committee.

Awardees may obtain funds from other sources for research in the same or similar areas as that conducted under these awards, as long as there is no conflict with meeting the terms of BWF's award. Awardees may not hold concurrent BWF career development awards.

The support allocated for research is under the control of the awardee and may be used flexibly for items such as equipment, consumable supplies, travel to scientific meetings, and laboratory personnel working with the awardee. Prior approval by BWF is required when, within an award year, purchases of equipment exceed \$20,000 or travel costs exceed \$6,000.

During the award period, unused research funds may be carried over to the succeeding year. Any unused funds held by institutions when awards expire or are terminated must be returned to BWF, unless the Fund has granted prior permission to retain the funds. Awardees may receive a no-cost extension of up to 24 months; requests explaining why an extension is needed must be submitted in writing at least four months prior to the end of the award.

Stipends received by awardees while in the United Kingdom may be subject to U.K. income taxes. Awardees are encouraged to seek tax advice before leaving the United States or Canada.

COMPLETING THE APPLICATION

Application must be typed (single-spaced, using 12-point font size) on standard 8 1/2 by 11 inch white paper with one inch or larger margins on all sides. Number each sub-section separately.

Have you included? ...

- Signed application form
- Copy of permanent residency card (for non-US or Canadian citizens only)
- Curriculum vitae (three pages maximum)
- Personal statement
- Proposal summary (two pages maximum)
 1. scientific summary
 2. lay summary
- Research plan (six pages maximum, not including references and glossary)
- Reprints (no more than three)
- Letter from faculty sponsor
- Letter from graduate advisor
- Two additional letters of support (may be sent separately)

Collate the application (including reprints) so that the original and each of the 25 copies is complete. Fasten each copy with *one* rubber band or *one* binder clip. Do **not** enclose a cover letter.

Do not use:

- staples
- folders or dividers
- non-BWF cover sheets
- paper clips
- colored paper or tabs
- internal institutional documents (i.e. approval forms)

Important! Out of fairness to candidates who adhere to the guidelines, applications that do not adhere to the stated application procedure, or that contain more than the specified number of pages, letters, or reprints, will be rejected. In addition, applications that are not properly organized or that do not include all of the requested materials will be rejected. **All materials, including letters of support, must be received by 4 p.m. EST on October 3, 2005.**

Send an original and 25 copies to:

For delivery by express courier service:

Burroughs Wellcome Fund
Career Awards in the Biomedical Sciences
21 T. W. Alexander Drive
Research Triangle Park, N.C. 27709
(919) 991-5100

For delivery by U.S. Postal Service:

Burroughs Wellcome Fund
Career Awards in the Biomedical Sciences
P. O. Box 13901
Research Triangle Park, N.C. 27709-3901

For awardees in the United Kingdom, the administrative fee is intended to cover the employer's contribution to National Insurance (fellows are responsible for the employee's contribution) and other benefits. For grant recipients in the United States, the fee is intended to cover the cost of medical insurance and other benefits, such as retirement. For awardees in Canada, the fee is to be used as a contribution to the employer's benefit plan.

BWF acknowledges that most postdoctoral fellows will move to new institutions to begin their independent research careers. Awards may be transferred only with written approval of BWF. Requests must be received at least four months prior to any move, and approval will be based on whether the move will enhance the awardee's scientific growth and career development. Awardees who change institutions may take with them any equipment or supplies purchased under the award.

BWF prefers that awardees not move from one institution to another during their three years of faculty service. Special training opportunities that require faculty-level awardees to spend up to a year away from their base institution may be considered; awardees must submit to BWF a written request that explains why the training is needed.

Scientific publications or presentations that result from these awards should acknowledge the awardee's

receipt of a Burroughs Wellcome Fund Career Award in the Biomedical Sciences. Copies of journal articles and other publications should be sent to BWF along with the annual progress report.

Awardees should follow their institutions' patent, copyright, and intellectual property policies regarding discoveries that result from research conducted under these awards. Awardees must adhere to all federal, state, and local regulations regarding the participation of human subjects, and the use of animals, radioactive or hazardous materials, and recombinant DNA in their research projects. BWF expects the appropriate federal, state, and local guidelines with regard to scientific misconduct are in place and enforced at all institutions with which BWF awardees are affiliated.

Awardees should share scientific findings in a timely manner via the standard means of scientific communication, including publications and/or presentations in scientific forums. BWF will not retain any rights to published results or patents that result from the research.

2005 program grant recipients will be published in the June issue of *Science* and on BWF's website at www.bwfund.org under the CABS program area after May 2, 2005.

PROGRAM ADVISORY COMMITTEE

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BWF Career Awardee in the Biomedical Sciences – 1995

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John York, Ph.D.

Associate Professor
Howard Hughes Medical Institute Assistant Investigator
Duke University Medical Center
BWF Career Awardee in the Biomedical Sciences - 1995

*A new member in structural biology will be added to the
committee for the 2006 award cycle.*

BURROUGHS WELLCOME FUND

The Burroughs Wellcome Fund is an independent private foundation dedicated to advancing the medical sciences by supporting research and other scientific and educational activities. Within this broad mission, BWF seeks to accomplish two primary goals: to help scientists early in their careers develop as independent investigators, and to advance fields in the basic medical sciences that are undervalued or in need of particular encouragement.

With its endowment of over \$600 million, BWF makes approximately \$30 million in grants annually in the United States and Canada. BWF's financial support is channeled primarily through competitive peer-reviewed award programs, which encompass five major categories—basic biomedical sciences, infectious diseases, interfaces in science, translational research, and science education. BWF makes grants primarily to degree-granting institutions on behalf of individual researchers, who must be nominated by their institutions. To complement these competitive award programs, the Fund also makes grants to nonprofit organizations conducting activities intended to improve the general environment for science.

BWF is governed by a Board of Directors composed of distinguished scientists, educators, and business leaders. The Fund was founded in 1955 as the corporate foundation of the pharmaceutical firm Burroughs Wellcome Co. In 1993, a generous gift from BWF's sister philanthropy in the United Kingdom, the Wellcome Trust, enabled the Fund to become fully independent from the company, which was acquired by Glaxo in 1995. BWF has no affiliation with any corporation.

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Career Development Resource

A 13-chapter, 230-page guide to laboratory management, *Making the Right Moves: A Practical Guide to Scientific Management for Postdocs and New Faculty*, co-developed by BWF and Howard Hughes Medical Institute. Available free at:

www.hhmi.org/grants/office/scimgmt.html#