Accomplishments

* What are the major goals of the project?

Based on the results of campus faculty climate survey in 2009, the goals of UNH’s ADVANCE PAID program were to:
1. Facilitate women STEM faculty's ability to advance successfully through their careers at UNH as leaders in research and teaching
2. Increase women STEM faculty's capacity at UNH to influence policy and decisions at the institutional and national levels
3. Increase UNH women STEM faculty's satisfaction with resources and research support and minimize feelings of isolation amongst women STEM faculty
4. Increase women STEM faculty at UNH satisfaction with faculty colleagues, deans and chairs who mentor them

To address these goals we established 1) an internal ADVANCE PAID Leadership Team, 2) an external advisory board and 3) three working groups i) Professional Development, ii) Effectiveness Assessment and iii) Awards and Fellowships.

*What was accomplished under these goals (you must provide information for at least one of the 4 categories below)?*

Major Activities: In our fourth, no-cost extension year of this grant we had the following major activities:

1. UNH's ADVANCE PAID Leadership Team: The Leadership Team chaired by Co-PI Karen Graham met face-to-face on 3 times during the Academic year 2012-2013. The Leadership Team reviewed the findings from working groups and set the agendas for the upcoming semesters.


3. The working groups met twice per semester throughout the 2012-2013 academic year.

3.1 Professional Development

The cornerstone of the Professional Development working group is it's collaboration with UNH's existing Faculty Mentoring and Professional Development Program. We have built on the successful model of professional development to develop two key programs: Faculty forums with a cohort of STEM women faculty and Workshops with Deans, center directors and department chairs.

In 2013 we replaced the ADVANCEing Your Career at UNH and Beyond with 1) an ADVANCE PAID brunch December 12, 2012, 2)a series of four small-group workshops focussed on Equity, Mentoring, Engagement and Recruitment/Retention and 3) support of 5 STEM female faculty participating in a Writing Acadmey Summer 2013. See below for details of these programs.

3.2 Awards and Fellowships

The Awards and Fellowships working group developed and implemented its fourth year of two major program initiatives: Collaborative Scholarship Advancement Awards and the Karen Von Damm Leadership Development Grants.

The **Collaborative Scholarship Advancement Awards** are competitive grants for teams of faculty (research, tenure track and clinical) that provide financial support to pursue scholarly collaboration. Awards will be given annually to proposals that put forth a project that enhances research and teaching activities and clearly specifies the career enhancement of the project for both faculty members.
The Karen Von Damm Leadership Development Grant is a competitive grant to support campus and/or off-campus leadership opportunities for women faculty in the STEM disciplines. There was one final call for proposals to this program in YR4.

RFPs for the Karen Von Damm Leadership Development Grants (KVD) and the Collaborative Scholarship Advancement Awards (CSAA) were distributed in November of 2012 with due dates for both programs of December 3rd. We received 2 applications for the KVD and 10 for the CSAAs. See below for the awards presented this year.

3.3 The Effectiveness Assessment Working Group:

The Effectiveness Assessment working group helps to determine the overall success of the UNH ADVANCE PAID grant. Whereas the external evaluator’s role (Dr. Mariko Chang) analyzes individual-level outcomes of grant participants (such as those who take part in workshops), this working group analyzes institutional-level outcomes and transformations that effect not only the participants but the entire university community. The EA working group meets regularly to analyze results of the climate survey and to compile the institutional data. Aliya Sassi, a PhD student in Economics supported by the ADVANCE PAID grant, analyzed the Institutional Research Data and worked closely with the Survey Center to analyze the climate survey results. Please see the external evaluator's report for details on this.

4. UNH’s ADVANCE PAID Advisory Board. The ADVANCE PAID Advisory Board met virtually via teleconference in June 2012. Achievements to date and plans for the final year of the project were discussed. All external members of the ADVANCE PAID Advisory Board agreed to serve on the UNH ADVANCE IT grant and met virtually again to discuss the transition to the new award in May 2013.

The ADVANCE PAID Advisory Board is chaired by UNH’s President Mark Huddleston and is comprised of John Aber, Provost and Vice President for Academic Affairs, UNH, UNH, Susan Carlson, Vice Provost for Academic Personnel, University of California, Mary C. Juhas, Senior Assistant Dean Diversity & Outreach, Research Scientist in Materials Science and Engineering (MSE), The Ohio State University, Joan Leitzel, President Emeritus, UNH, Judith White, Executive Director, Higher Education Resource Services (HERS).

Specific Objectives: The professional development committee report:

Significant Results: In 2013 we replaced the ADVANCE PAID brunch December 12, 2012, 2) a series of four small-group workshops focussed on Equity, Mentoring, Engagement and Recruitment/Retention and 3) support of 5 STEM female faculty participating in a Writing Academy Summer 2013. See below for details of these programs.

1) The ADVANCE PAID Brunch was held on December 12, 2012. The goals of this meeting were to 1) disseminate results from the ADVANCE PAID program to date and 2) to have small group discussions to determine the topics for small-group discussions for four workshop slated for spring 2013. The 35 participants included those faculty who had participated in the ADVANCE PAID programs over the past 3 years and administrators at varying levels. Small group discussions resulted in the following topics for spring workshops: Equity, Mentoring,
Engagement and Recruitment/Retention. Support for the recently funded ADVANCE IT program was also discussed and several faculty volunteered to help with sub-committee work around these topics.

2) In spring 2013 we held 4 workshops. These small-group workshops (from 12-20 participants) were formatted for free discussion to come up with recommendations for the ADVANCE IT working groups. The results of the workshops were summarized and are being shared with the ADVANCE IT program specifically by Ruth Varner's participation in working groups and as a member of the ADVANCE IT Internal Steering Committee.

3) The ADVANCE PAID program supported the participation of 5 STEM female faculty in UNH's Writing Academy in summer 2013. The first Writing Academy was developed by the Office of the Senior Vice Provost for Engagement and Academic Outreach and offered in summer 2013. It consisted of 2 multi-day writing retreats and ongoing support from scholarly and career coaches. Please see the external evaluator's report for the evaluation of these faculty experiences.

The awards and fellowships committee results:

KVD: One award was made in AY 2012-2013 for the Karen von Damm Leadership Development Grant:

Dr. Jo Daniel, Professor, Civil Engineering. This award supported her teaching while she took on leadership positions as Civil Engineering Graduate Program Coordinator, and as Chair of the Scientific Committee for an international professional conference.

CSAAs: Four CSAAs were awarded in this final round of funding (AY 2012-2013):

Serita Frey Prof, Nat. Res. & Env., and Alexandra Conosta, EOS-ESRC, Research Post-Doc. received an award to develop a research-teaching collaboration that integrate new, sensor-based research on soil processes with a new curriculum focused on environmental sensors in soil ecology, to be incorporated into the Soil Ecology course taught by Dr. Frey.

Meghan Howey Asst. Prof, Anthropology, and Adrienne Kovach, Research Asst. Prof., Nat. Res. received an award for an interdisciplinary study using ancient DNA to inform contemporary cod fishery management. This collaborative project will provide the conceptual basis and the data to develop new teaching models and to pursue new cross-disciplinary funding opportunities.

Feixia Chu, Asst. Prof., and Kevin Culligan, Research Asst. Prof., Molecular, Cellular & Biomed. Sci. received an award to study how eukaryotic cells respond to DNA damage and replication blocks. They use Arabidopsis thaliana as a model to understanding molecular pathways involved in sensing DNA damage, using both genetic and biochemical approaches.

Linda Kalnejais, Asst. Prof., Earth Sciences, and Joe Salisbury, Research Asst. Prof., EOS-OPAL received an award to develop a research collaboration coupling marine chemistry observational data with sediment geochemistry. They will study reactions occurring in sediment near a Stellwagen Bank mooring, the site of an instrument array measuring carbonate-system parameters. This collaboration will provide a new understanding of carbon chemistry in the bottom waters of this region, and will provide an assessment of the impact of ocean acidification on the calcifying organisms in the Southern Gulf of Maine.
There are several key outcomes of the ADVANCE PAID program that should be highlighted:

1) Institutionalization of the Karen Von Damm Leadership Development Grant. Mrs. Louise Von Damm has endowed a faculty award in the College of Engineering and Physical Sciences in her daughter's name based on the criteria we have developed for the KVD award in the ADVANCE PAID program. We hope to award this for the first time in Spring 2014.

2) Awarding of an ADVANCE IT award. The ADVANCE PAID program played prominently in preparing UNH and developing a successful proposal to the ADVANCE IT rfp. The PAID program staff and Leadership team participated in the proposal development and are currently serving in many key roles of the ADVANCE IT program to ensure that what we learned through the PAID program is carried forward through the next five years and beyond.

* What opportunities for training and professional development has the project provided?

The ADVANCE PAID program provided professional development for many faculty (See descriptions above). Specifically a doctoral student in Economics was supported through funds from the ADVANCE PAID for the institutional and climate data analysis portion of the program. She was able to complete her PhD and her experience with the ADVANCE PAID program helped her attain a position as an economist with the Department of Health and Human Services.

* How have the results been disseminated to communities of interest?

The results have been disseminated to the participants in the ADVANCE PAID program through the leadership team and events held during the 2012-2013 academic year. The results have also been shared with leaders of ADVANCE IT program and there are plans to share the remaining results more broadly at UNH.

Supporting Files

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Products

Books
Nothing to report.

Book Chapters
Nothing to report.

Conference Papers and Presentations
Nothing to report.

Inventions
Nothing to report.

Journals
Nothing to report.
Licenses
Nothing to report.

Other Products
Nothing to report.

Other Publications
Nothing to report.

Patents
Nothing to report.

Technologies or Techniques
Nothing to report.

Thesis/Dissertations
Nothing to report.

Websites
Nothing to report.

Participants/Organizations

What individuals have worked on the project?

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<th>Name</th>
<th>Most Senior Project Role</th>
<th>Nearest Person Month Worked</th>
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<tbody>
<tr>
<td>Huddleston, Mark</td>
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<td>Shea, Christine</td>
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</tr>
<tr>
<td>Varner, Ruth</td>
<td>Faculty</td>
<td>3</td>
</tr>
</tbody>
</table>

Full details of individuals who have worked on the project:

Mark Huddleston
Email: presidents.office@unh.edu
Most Senior Project Role: PD/PI
Nearest Person Month Worked: 1

Contribution to the Project: Dr. Huddleston served as PI on the project and chair of the ADVANCE PAID external advisory board. He also served as an advocate for the program initiatives within the UNH community and to the broader external community.
Funding Support: N/A

International Collaboration: No
International Travel: No

Thomas Brady
Email: tom.brady@unh.edu
Most Senior Project Role: Co PD/PI
Nearest Person Month Worked: 1

**Contribution to the Project:** Dr. Brady served on the ADVANCE PAID Leadership Team and as the Dean of one of the two primary STEM colleges served as an advocate for program initiatives. He was a key player in nominating individuals for participation in the grants and professional development programs launched as part of the ADVANCE PAID program.

Funding Support: N/A

International Collaboration: No
International Travel: No

Janet W Campbell
Email: janet.campbell@unh.edu
Most Senior Project Role: Co PD/PI
Nearest Person Month Worked: 1

**Contribution to the Project:** Dr. Campbell participated in the Awards and Fellowships committee.

Funding Support: none

International Collaboration: No
International Travel: No

Karen J Graham
Email: kjgraham@cisunix.unh.edu
Most Senior Project Role: Co PD/PI
Nearest Person Month Worked: 2

**Contribution to the Project:** Dr. Graham served as the lead Co-PI on the project and chair of the ADVANCE PAID Leadership Team. In collaboration with Dr. Varner, she was responsible for the day to day oversight of the project’s goals and activities.

Funding Support: This award

International Collaboration: No
International Travel: No

Wanda Mitchell
Email: wanda.mitchell@unh.edu
Most Senior Project Role: Co PD/PI
Nearest Person Month Worked: 1
**Contribution to the Project:** Dr. Mitchell served as a member of the ADVANCE PAID Leadership Team. In addition, as Vice Provost for Faculty Development and Inclusive Excellence, she provided support for the professional development activities co-sponsored with the ADVANCE program.

**Funding Support:** N/A

**International Collaboration:** No

**International Travel:** No

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**Diane Foster**  
**Email:** diane.foster@unh.edu  
**Most Senior Project Role:** Faculty  
**Nearest Person Month Worked:** 1

**Contribution to the Project:** Dr. Diane Foster facilitated the Advancing Your Career at UNH and Beyond program.

**Funding Support:** This award

**International Collaboration:** No

**International Travel:** No

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**Christine Shea**  
**Email:** christine.shea@unh.edu  
**Most Senior Project Role:** Faculty  
**Nearest Person Month Worked:** 1

**Contribution to the Project:** Dr. Shea chaired the research effort for the ADVANCE PAID program. She supervised the graduate student and provided oversight for the collection and analysis of institutional data, the development and implementation of the climate survey, and the development of project data reports.

**Funding Support:** This award

**International Collaboration:** No

**International Travel:** No

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**Ruth K. Varner**  
**Email:** ruth.varner@unh.edu  
**Most Senior Project Role:** Faculty  
**Nearest Person Month Worked:** 3

**Contribution to the Project:** Dr. Ruth Varner was the ADVANCE PAID program coordinator for all 4 years of the project. She was in charge of day to day activities of the grant including convening working groups and administering awards and grants.

**Funding Support:** From this award

**International Collaboration:** No

**International Travel:** No

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**What other organizations have been involved as partners?**

Nothing to report.
What other collaborators or contacts have been involved?

NO

Impacts

What is the impact on the development of the principal discipline(s) of the project?

The University of New Hampshire achieved the four goals of its ADVANCE–PAID grant. Significant impacts by goal include:

Goal #1: Facilitate women STEM faculty’s ability to advance successfully through their careers as leaders in research and teaching

• ADVANCing Your Career Workshops increased the sense of community and facilitated the development of networks that can be used to gain knowledge and information about resources

• Writing Academy facilitated STEM women faculty’s career advancement by providing the time and resources to complete writing projects and by helping them develop skills and practices to become more effective and productive writers overall

Goal #2: Increase women STEM faculty’s capacity to influence policy and decisions at the institutional and national levels

• Karen Von Damm Leadership Development Grants provided women with the resources and validation to assume leadership opportunities at UNH and in their professional fields, increasing their visibility and providing valuable leadership skills. Many recipients reported this grant provided the springboard to additional leadership opportunities.

• Endowment will sustain the Karen Von Damm grants Goal #3: Increase women STEM faculty satisfaction with resources and research support and to minimize feelings of isolation among women STEM faculty

• 18 women received Collaborative Scholarship Advancement Awards (CSAAs) that achieved the desired goals of increasing satisfaction with resources and research support and minimizing feelings of isolation

• CSAAs also had several additional significant impacts, including: enhancing participants career development (expanded networks of collaborators, provided new research expertise, fostered long-term collaborations, mentoring, catalyst for additional grant funding)

• positive impacts on students (course improvements, benefiting from expertise of research faculty, research experiences and theses)

• improving climate between research and tenured/tenure-track faculty

• facilitating new grant proposals and new grant funding

• supporting interdisciplinary work §

  • 67% Cross--Departmental

  • 53% Cross--College

  • 20% Cross--STEM/SBS

Goal #4: Increase women STEM faculty satisfaction with faculty colleagues, deans, and department chairs who mentor them
• Workshop for Deans, Chairs, and Center Directors provided participants with a better understanding of how they plan to mentor faculty through the tenure and promotion process and provided strategies for reducing gender bias in the review process

Collectively, the program components achieved the following additional impacts:

• Increased faculty and administrative awareness of the challenges facing women STEM faculty
• Increased commitment from administrators to address the challenges facing women STEM faculty at UNH
• Fostered opportunities for STEM women to interact, build community, and expand their networks
• New grant proposals were submitted and funded
• Students obtained new knowledge and research opportunities
• The visibility and recognition of women faculty at UNH and beyond increased, resulting in new leadership and professional opportunities

What is the impact on other disciplines?
Nothing to report.

What is the impact on the development of human resources?

Besides what has been reported above, as part of the ADVANCE PAID grant, 32 STEM women faculty (approximately 65%) participated in a significant way—meaning they were either grant recipients (CSAA or KVDLDG), ADVANCing Your Career participants, Writing Academy participants, and/or on the Leadership Team. The participants reported meaningful impacts of their participation on their professional development, including new collaborations, submission of new grant proposals and receipt of grant funding, engagement with new lines of research, decreased isolation, professional recognition, increased visibility, new leadership opportunities, promotion, and the development skills and practices to become a more effective and productive writers. But the impacts of the grant also reached students (via improved courses and opportunities to engage in research) and had positive impacts on the university climate by improving communication between research and tenured/tenure‐track faculty and by improving the awareness and discussion about the issues facing women STEM faculty.

What is the impact on physical resources that form infrastructure?
Nothing to report.

What is the impact on institutional resources that form infrastructure?
Nothing to report.

What is the impact on information resources that form infrastructure?
Nothing to report.

What is the impact on technology transfer?
Nothing to report.

What is the impact on society beyond science and technology?

Several best practices and lessons learned are also likely to be applicable to other institutions seeking similar goals and can be disseminated broadly. General best practices and lessons learned include:

• Encouraging and funding collaborations between tenure-track and research faculty improves climate and enhances research quality, capacity, and opportunities
• Small grants are a sound investment that pay off; seed funds provide resources necessary to develop larger competitive grant proposals and new external grant funding

• Providing mechanisms for women STEM faculty to interact and discuss challenges and opportunities helps decrease isolation and develop a sense of community that women can access to learn about university dynamics and expand their networks

• The opportunity to honor the work and memory of an esteemed colleague personalizes grants and provides added motivation to recipients

• Students benefit from strengthening the research and leadership development of faculty

• Time (provided by summer funding, course releases, writing retreats, etc.) is a critical resource for faculty to pursue leadership opportunities, new research directions, and publish their work

• Developing in-house expertise strengthens the ability to sustain effective programs

• Active engagement by the university’s leadership strengthens the impact of the grant

• To sustain networks and a sense of community, connections must be reinforced periodically

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**Changes/Problems**

**Changes in approach and reason for change**

In the final no cost extension year we replaced the ADVANCing Your career at UNH and Beyond program with a large forum including all participants in the ADVANCE PAID program, the Leadership Team and administrators. This then led to the development of four workshops in Spring 2013 focused on discussions around Equity, REcruitment and Retention, Engagement and Mentoring. The results of these discussions were disseminated to the leadership of the ADVANCE IT program at UNH to help facilitate policy and practice change.

**Actual or Anticipated problems or delays and actions or plans to resolve them**

Nothing to report.

**Changes that have a significant impact on expenditures**

With remaining funds we were able to support 5 STEM female faculty participation in the Writing Academy.

**Significant changes in use or care of human subjects**

Nothing to report.

**Significant changes in use or care of vertebrate animals**

Nothing to report.

**Significant changes in use or care of biohazards**

Nothing to report.

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**Special Requirements**

Responses to any special reporting requirements specified in the award terms and conditions, as well as any award specific reporting requirements.