



NHHPC eNews

February 2012

NHHPC 2011 Summary and 2012 Plans

We are proud to announce that our [membership](#) has grown to 108 government, industry, academic, and non-profit organizations since we launched the NHHPC in October 2010! We conducted three successful workshops on [Collaborative Innovation Strategies and Best Practices](#), [Connecting Through Collaboration](#), and [Microbiology](#) hosted at three different NASA Centers. Our members formed working groups in [Education and Outreach](#) and [Social Entrepreneurship](#), and we are looking forward to establishing more of these topical forums. We also kicked off our Member to Member Connect webcasts and launched a [member secure wiki](#).

2012 brings us this newsletter and the use of new collaborative tools like MoPad, as well as the first Member to Member Connect Webcast of the year featuring IBM on Feb 29 2:30pm CT. Additionally, NASA Space Life Sciences has opened their Innovation Lecture Series webcasts to NHHPC members—look for details of these events on a quarterly basis. We are actively planning the next workshop, scheduled for Spring 2012, and will distribute details soon.

Message from the Director and Deputy Director

We're delighted to launch the first issue of NHHPC eNews—a quarterly source of information created by members, for members, to share news, successes, and collaborative project ideas from your organization. NHHPC eNews will also include updates from NHHPC working groups, research solicitations, information on upcoming NHHPC and member events, and any other news you'd like to share. We hope you enjoy this issue and would like to express our thanks to those who contributed to make it a great success! We look forward to a collaborative and productive 2012.

Best Regards

Jeff and Carol



Jeffrey R. Davis, MD, MS
NHHPC Director
Johnson Space Center



Carol W. Carroll
NHHPC Deputy Director
Ames Research Center



Member News

The Patricia Hilliard Robertson Center for Aviation Medicine

The [Patricia Hilliard Robertson Center for Aviation Medicine](#) initiated an eNewsletter. The January eNewsletter is available on the NHHPC [Member News](#) page.

NSBRI Explorer

The [National Space Biomedical Research Institute Explorer](#) is an email publication designed to keep you informed of accomplishments, program activities, and people in the news. The NSBRI Explorer Newsletter is available from the [NSBRI web site](#).

Challenge.gov

The Challenge.gov team at the [U.S.](#)

[General Services Administration](#) will experiment with Open Office Hours via phone. Topics will include America COMPETES and other legal authorities and questions about Challenge.gov. Any federal employee can call in and talk about/ask whatever they want regarding challenges and prizes.

Mozilla

Pascal Finette from [Mozilla](#) will keynote the TCC conference with a talk about "Innovate in the Open". He has offered to share the slides and walk individual members through the key points on the phone/video conference if interested. Please contact Pascal for more information.

What is the NASA SLSD Innovation Lecture Series?

The [SLSD Innovation Lecture Series](#) was established as a forum for experts in industry, academia, and government to share their experiences and successes with new business models for driving innovation. Topics ranging from collaborative/open innovation, accelerated research models, open source software development, commercial space, innovative portfolio management, and novel approaches to education and outreach are presented to provide information on and encourage new ways for driving innovation. We are pleased to announce that these webcasts will now be open for NHHPC member participation.

The next Innovation Lecture Series is tentatively scheduled for April 20 featuring GE. Look for details soon!

Stephen Shapiro

held the January Innovation Lecture Series: [Innovate the Way You Innovate](#).



What can be expected from the Member to Member Connect Webcasts?

Member organizations have the opportunity to present their organization's innovation successes, project plans, collaboration ideas and needs to each other via WebEx on a bi-monthly basis. Guidelines are available to assist with member presentations and can be found on the [NHHPC website](#). Please contact the [NHHPC team](#) if you are interested in presenting your interests and accomplishments to other member organizations—we need presenters for June and August as well as for future dates.



New Projects/Connections

NASA Space Life Sciences Space Cell Biology Project

NASA Space Life Sciences Space Cell Biology Project is developing 3-D tissue engineering models using the rotating wall perfused bioreactor, a state of the art cell culture system used on Earth to grow high-fidelity tissue with structural and functional characteristics of native tissue. These models will be grown in the rotating bioreactor, as part of the ISS National Lab facility, to demonstrate the microgravity advantage of performing tissue engineering in space, leading to medical applications in the growing field of regenerative medicine for Earth benefits. The project is working together with institutions that are on the forefront of utilizing high fidelity in vitro tissue models to further biological/medical research. They have conducted preliminary in-flight investigations with promising results. We are currently collaborating with the Biodesign Institute at Arizona State University and Drexel University to develop a physiologically relevant lung tissue model that has important medical applications in infectious disease research.

Challenge.gov

The Challenge.gov Team at the U.S. General Services Administration is working with:

- The National Academy of Sciences' Government University Industry Research Roundtable (GUIRR). They reached out to GSA to do a webinar for their members regarding how to communicate challenges and prizes to university students and professors.
- The National Association of Schools of Public Affairs and Administration (NASPAA) also reached out to the Challenge.gov team. The two parties will be working to get information about challenges and prizes to their member schools.

Mozilla

Mozilla launched the WebFWD Open Innovation Accelerator & Incubator Program in the 2nd half of last year. Response from the market has been great and some great references can be found in the press section of the website.

Office of Aerospace Medicine (AAM)

The Office of Aerospace Medicine (AAM) in FAA Aviation Safety has implemented policy for developing an internal Safety Management System (SMS) process. At the Civil Aerospace Medical Institute, we have completed a database review to determine what aviation safety and airmen medical data is available to aid in quantifying risks associated with medical conditions as related to aviation safety. We just completed an AAM-wide collaborative SMS project examining the criteria for certain medical conditions being further reviewed on issued medical certificates by making the process more efficient and bringing the focus more narrowly aimed towards airmen with the highest medical risk factors that could potentially impact aviation safety.

Open.gov

The NASA Open Government Initiative is leading the development of the International Space Apps Challenge as one of the United States commitments to the international Open Government Partnership. This is an international codeathon event that will take place on all seven continents (and in space) on 21 - 22 April 2012. Participants in the event will collaborate to build software, open hardware, data visualization, and citizen science platform solutions that contribute to the space exploration mission and solve global challenges that focus on improving life on earth.



New Projects/Connections

FAA Civil Aerospace Medical Institute

The [FAA Civil Aerospace Medical Institute](#) has teamed with [NASA Space Life Sciences](#), [NSBRI](#), Mayo Clinic, The Veterans Administration, Transport Canada, Medical Representatives from ICAO, [Wyle](#), [Futron Corporation](#), The Federal Motor Carriers Safety Administration and medical certification representatives of the military services to form the Medical and Performance Risk Working Group (MPRWG). This effort continues the work begun in 2008 with a joint NASA/FAA conference on Probabilistic Risk Assessment (PRA). This team hoped to use NASA's integrated medical model (IMM) to work collaboratively to develop and implement evidence-based and risk-informed systems and assign better risk values to the medical certification of individuals in special occupations including space and aviation. Since that time, this group has held three formal annual meetings together with numerous teleconferences in between the formal meetings. New projects such as quantifying expert opinion in medical certification, more effective Aerospace Medical Examiner (AME) surveillance, and multivariate modeling of airmen pathologies evolved from these multi-disciplined discussions. The next MPRWG meeting is scheduled for late spring of this year.

Translating Advanced Science into Personalized Health

Dr Paula J Nenn ([OHPRF](#)), Dr Mimi Guarneri (Scripps Center for Integrative Medicine), Eugene Vaisberg ([OHPRF](#)), Dr Kenneth R. Pelletier ([U of Arizona & UCSF Medical](#))

In order to prevent the impending financial and social burden caused by a steady increase in the incidence of

chronic medical conditions, preventive self-care, (where people are responsible and accountable for their own health) is the only option. The era of personalized medicine (which includes genomics) has arrived but few know how to apply the science. In addition, there is good scientific support for the efficacy of modalities considered “alternative”, but this literature is both fragmented and vast. In order to address these issues, the [Optimal Health and Prevention Research Foundation \(OHPRF\)](#), a 501c(3) public charity based in San Diego, has spent three years in R&D pulling all the science together into one Optimal Health Program. This program is designed for health optimization and disease prevention in a broad, generally healthy, US population. For more information on this project please visit the [NHHPC project page](#).

Research Opportunities

Researchers from Cornell University and [University of Hawaii](#) are seeking applicants for a NASA-funded Mars analog habitat study (Hawaii Space Exploration Analog and Simulation, or HI-SEAS) to investigate the impact of food preparation, food monotony, nasal congestion and smelling acuity on food and nutrient intake in isolated, confined microsocieties. These are similar to astronaut crews on long term planetary exploration missions. The study will also track the use of habitat resources related to cooking and eating in order to provide data for future designs of planetary habitats. More information can be found at [HI-SEAS web page](#).



Member Innovation Successes

Challenge.gov Team at the U.S. General Services Administration

Since the launch of Challenge.gov in September 2010, the amount of Challenges and Prizes on the site has grown 405% - from 35 to 143! The amount of federal agencies using or that have used the site has increased 250% - from 15 to 38! With our Federal Acquisition Service, the Challenge.gov team created a GSA Schedule for Challenge and Competition Services, and features 12 vendors, including ChallengePost, InnoCentive and TopCoder.

UsersInnovate

UsersInnovate is experimenting with Dr. Eric von Hippel's Lead User theory in relation to process innovation for a hospital group. The learning method was traditionally used for product innovation but is being applied to processes!

NHHPC Working Group Announcements

Social Entrepreneurship Working Group

A call for new [Social Entrepreneurship Working Group](#) Members!

The Social Entrepreneurship Working Group strives to meet goals that benefit both life in space and on Earth.

Our goals include:

- Resource and knowledge sharing among member organizations to find social entrepreneurship opportunities that benefit both space and life on earth interests
- Collaborate on new and novel technologies for providing clean water, food and air
- Leverage resources of member organizations to advance humanitarian efforts for understanding causal mechanisms of disease, virulence of infectious agents, and delivery mechanisms for vaccines and medications

We welcome any member who is interested in social entrepreneurship to join in the next working group meeting scheduled for March 8 at 1 pm CST. Please contact Working Group Lead [Carissa Vidlak](#) with any questions, thanks!

Education & Outreach Working Group

The [Education & Outreach Working Group](#) has been meeting monthly or better, developing an activity for students. While the working group is diverse in their educational focuses, this particular project is aimed at middle school and a mission to an asteroid. Set to release in February, about a dozen partners are contributing to the design of this activity to draw attention to STEM fields, with four partners promoting and executing it for students. The recognized entries are slated for display on the NHHPC web site as a reward for participation so look for results of the activity this Spring.

For more information, contact Working Group Lead [Kevin Rosenquist](#).



Upcoming Member Events

- Challenge.gov Team at the U.S. General Services Administration is holding a webinar/virtual meet and greet with vendors on GSA Schedule for Challenge and Competition Services. For more information, contact Karen Trebon, Deputy Program Manager, Challenge.gov, Karen.trebon@gsa.gov
 - February Member to Member Connect Webcast – Featuring IBM (February 29 at 2:30pm CT)
 - NHHPC Social Entrepreneurship Working Group Meeting – (March 8 at 1pm CT)
 - NASA SLSD Innovation Lecture Series Webcast – Featuring Lisa Kennedy and Susan Rice from GE (April 20)
 - 3rd NHHPC Workshop – Spring 2012
 - June NHHPC Member to Member Connect webcast – (June 12 at 2:30pm CT)
 - NASA SLSD Innovation Lecture Series Webcast – Featuring Dr. Adrien Treuille (July)
 - August NHHPC Member to Member Connect Webcast – (August 14 at 2:30pm CT)
 - As part of WebFWD, Mozilla is conducting regular webinars on a diverse set of topics and the recorded sessions can be found at [LearnFWD Webinars](#).
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