

NEWSLETTER

Upcoming Events

ECOGIG Media Day July 5, 2013 Gulfport, MS

American Public Health Association Annual Meeting

November 2-4, 2013

Boston, MA (stop by the GoMRI exhibition booth!)

RFP-IV Release

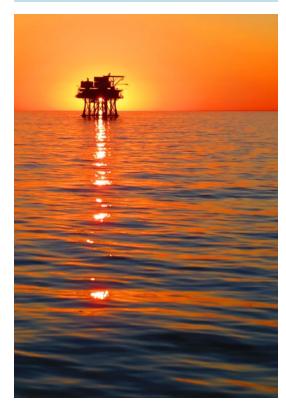
November 15, 2013

Gulf of Mexico Oil Spill and Ecosystem Science Conference

January 27-29, 2014 Mobile, AL

GoMRI Consortia All Hands Meeting

January 30, 2014 Mobile, AL



About the Gulf of Mexico Research Initiative

The Gulf of Mexico Research Initiative is a 10-year, \$500 million independent research program established by an agreement between BP and the Gulf of Mexico Alliance to study the effects of the Deepwater Horizon incident and the potential associated impact of this and similar incidents on the environment and public health.





Left: April 20, 2013 marked the third anniversary of the explosion on the Deepwater Horizon drilling rig. Right: Dr. Steven Murawski, Director of C-IMAGE, is on the Florida Institute of Oceanography's RV Weatherbird II measuring and collecting tissue, bone, and blood samples from bottom-dwelling fish to assess the health of deep-sea marine life. (Photo by C-IMAGE)

The Human Side of Oil Spill Science

Events from the Deepwater Horizon oil spill three years ago remain on the minds and hearts of many people, especially for those who lost loves ones. When an incident of this magnitude strikes, the story is sometimes as much about the response as the event itself and part of the response is from the science community.

In 2011, the Gulf of Mexico Research Initiative (GoMRI) awarded \$112.5 million to eight research consortia for studies to help us understand the oil spill, its impacts, and ways to respond better in the future. Experts from many fields of science have come together in an unprecedented manner to provide sound and trusted information. Eight Gulf-based scientists lead these teams from over 80 research institutions in 29 U.S. states and four countries. These directors share their perspectives about this research and their desire to help.

The Researchers on Conducting Independent Science for Better Decisions:

We are scientists seeking to understand what happened and what is going to happen. We want to be honest brokers of information. We have a high-quality, dedicated team who is looking for the truth. – Dr. Raymond Highsmith, ECOGIG

The science community is viewed with much different credibility than are people who are managing this spill from industry and government. We have a unique role to play as the independent arbiter of what happened and what we should be doing, irrespective of the costs, to actually help society. – Dr. Steven Murawski, C-IMAGE

...continued from previous page

The Researchers on the Need for Information:

Most people think that another spill like this will happen again despite all the best efforts of industry. The science coming out of this disaster is a good thing if it helps prevent a similar spill or allows us to mitigate the effects of it. – Dr. Piers Chapman, GISR

When the spill happened I received a lot of calls asking, 'Where is the oil going?', 'Will our beaches be ruined? and 'What will happen to the Gulf in the long-term?' Our interdisciplinary team of scientists is working hard to address these questions. – Dr. Eric Chassignet, Deep-C

People want to know how and why dispersants were applied and what it means when they are used. Once people understand that, then they can evaluate on their own the tradeoffs between what has or hasn't been done and talk with knowledge to their representatives about their needs and impacts. — Dr. Vijay John, C-MEDS

People are concerned about marine life and we are studying how dispersed oil impacts the base of the marine food web and the pros and cons of dispersants used below the surface or in open waters. We want to have a better understanding of the impacts before the next spill occurs. – Dr. Edward Buskey, DROPPS

The Researchers on the Impact to Society:

The ecosystem includes humans. The health of ecosystems goes hand in hand with the health of the social structure and the economy, so we're all on a path together. There are obvious and subtle impacts and we are committed to follow-through on the things we are finding out. – Dr. Nancy Rabalais, CWC

From this science, we can learn more about the ocean and have an impact on society. People care about the coast. This work is benefiting society. Fisheries will benefit. Students are getting educated. It's meaningful research. – Dr. Tamay Özgökmen, CARTHE

Adapted from a longer article. Original article published <u>here</u>.

Science Corner

Published science highlights from the GoMRI program

Multi-tissue molecular, genomic, and developmental effects of the Deepwater Horizon oil spill on resident Gulf killifish (Fundulus grandis)

Benjamin Dubansky et al.

Environmental Science & Technology, April 2013

Interannual recruitment dynamics for resident and transient marsh species: Evidence for a lack of impact by the Macondo oil spill

Ryan M. Moody, Just Cebrian, Kenneth L. Heck, Jr. PLOS One, March 2013

Dispersants as used in response to the MC252spill lead to higher mobility of polycyclic aromatic hydrocarbons in oil-contaminated Gulf of Mexico sand

Alissa Zuijdgeest, Markus Huettel PLOS One, November 2012

Assimilation of oil-derived elements by oysters due to the Deepwater Horizon oil spill

Ruth H. Carmichael et al.

Environmental Science and Technology, November 2012

Marine snow formation in the aftermath of the Deepwater Horizon oil spill in the Gulf of Mexico

Uta Passow et al.

Environmental Research Letters, September 2012

The weathering of oil after the Deepwater Horizon oil spill: Insights from the chemical composition of the oil from the sea surface, salt marshes, and sediments

Zhanfei Liu, Jiqing Liu, Qingzhi Zhu, and Wei Wu
Environmental Research Letters, September 2012

Homogeneous Nucleation of Methane Hydrate in Microsecond Molecular Dynamics Simulations

Sapna Sarupria and Pablo G. Debenedetti

Journal of Physical Chemistry Letters, September 2012

Forecasting sudden changes in environmental pollution patterns

María J. Olascoaga and George Halle PNAS, March 2012

To see all GoMRI publications, please visit the GoMRI <u>Publication Database</u>.

Note from the Research Board Chair

Dr. Rita Colwell, University of Maryland and Johns Hopkins University

The Deepwater Horizon oil well blowout represents a significant ecological event. It was defined by release of millions of gallons of crude oil and application of 1.8 million gallons of dispersants, together spreading into wetlands and beaches and also sinking into the deep ocean. The ecological significance is one aspect of the tragedy. More critical is that 11 lives were lost, and hundreds of oil spill workers, coastal inhabitants, and visitors suffered exposure to the oil and dispersants.

Shortly after the spill, BP established a \$500 million research fund over a 10-year period to explore impacts of the spill and provide improved understanding of the long-term ecological effects and provide better preparation for any future



event globally. The scientific research enabled by this funding is progressing rapidly and effectively in a way that has rarely been possible and this is being achieved through the management and oversight of the Gulf of Mexico Research Initiative (GoMRI).

The commitment of research funds has been accomplished following guidelines for investment in *five basic themes*. An independent *Research Board* was formed to provide management and oversight for the program and these responsibilities included solicitation and selection of the best science. The framework employed provides incentive for scientists to build interdisciplinary teams and to work in close collaboration.

The goal of the GoMRI is to improve the capability of society to understand, respond to, and mitigate impacts of petroleum pollution and related stressors of marine and coastal ecosystems, with emphasis on conditions in the Gulf of Mexico. Knowledge gained will be applied to restoration and improving the long-term environmental health of the Gulf of Mexico. Operating independently of BP, the GoMRI Research Board takes action with full authority over the program during the 10 year period of the initiative. The collaborative science emerging from this initiative is very impressive. Early results are redefining the interpretation of oil spills. Although all effects of this very serious oil spill on the Gulf of Mexico ecosystem may never be known to the last detail, we will certainly have valuable information to protect and restore the Gulf ecosystem.

From its very initiation, the Gulf of Mexico Research Initiative adhered to the established and highly respected standards of the National Academy of Sciences (NAS) and the National Science Foundation (NSF) for conduct of the scientific research. By taking advantage of the experience of both scientific organizations, the Research Board established a template for the Request for Proposals, conduct of peer review, selection of the best science, and communication of the scientific findings accurately and responsibly.

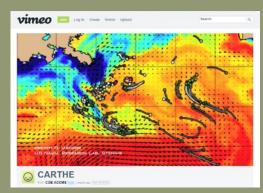
The memory of the tragedy of the Deepwater Horizon Oil Spill and its effect on the Gulf of Mexico region remains with us, but we anticipate the information provided by the Gulf of Mexico Research Initiative will help understand the impact and minimize the effect of any such disaster in the future.



Check out the video created by the Consortium for Advanced Research on Transport of Hydrocarbon in the Environment (CARTHE) on the 3rd Anniversary of the Deepwater Horizon Oil Spill. The 6 minute film does an excellent job of explaining the importance of scientific research after a catastrophic environmental

event and highlights the work of CARTHE. It includes commentary from CARTHE PI Tamay Ozgokmen, RSMAS Dean and Professor Roni Avissar, GoMRI Senior Scientist Chuck Wilson, and Vice-Chair of the GoMRI Research Board, Margaret Leinen.

http://vimeo.com/64470122.



A still shot from the video shows the transport of oil in the Gulf of Mexico.

Education Spotlight:

Deep-C Technology Experiences Bring Science to Life for Students

Education specialists and scientists with the <u>Deep Sea to Coast Connectivity in the Eastern Gulf of Mexico (Deep-C)</u> research consortium have multi-year efforts working with K-12 teachers and students and with university students across their consortium.

At Dauphin Island Sea Lab (DISL) this March, teams from six high schools in Florida competed in the first annual Deep-C Remotely Operated Vehicles (ROV) student competition. The high school student teams competed in a series of tasks, including one that tested the maneuverability of the vehicles and another that tested the operator's ability to identify marine organisms through a mounted camera. After the competition, students presented their design process and answered questions from scientists and engineers about their projects.

Dr. Tina Miller-Way, Chair of DISL's Discovery Hall Programs for Education and Outreach, explained that ROVs were chosen for this program because they have become an integral part of ongoing undersea research. She added, "ROVs are a great way to integrate technology, current Deep-C research and important concepts in STEM (science, technology, engineering and math) fields and also excite students."

A group of undergraduate students from Florida A&M University and Florida State University (FSU) are working on a project to enhance oil spill detection. "This team of engineering seniors is fabricating an experimental radar unit that will be used to measure oil thickness under laboratory conditions," explains Dr. Ian MacDonald, Professor of Oceanography in the Department of Earth, Ocean and Atmospheric Science at FSU and an advisor to the group. MacDonald describes the benefit of their work; "this will help to calibrate satellite measurements and could lead to the development of field instruments."

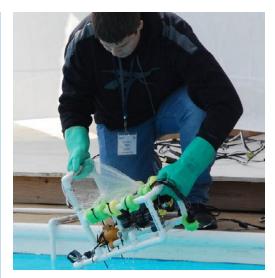
Dr. Oscar Garcia-Pineda, a geophysicist at FSU and an advisor who works closely with the group further explains the importance of these students' experiment, "the project has the potential to significantly improve coordinated response operations during an oil spill." Dr. Garcia-Pineda explained that the ability to validate lab measurements with the satellite data could provide valuable information to crisis responders such as the U.S. Coast Guard and NOAA.

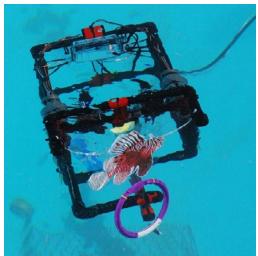
The Deep-C Coordinator Tracy Ippolito describes the inter-connectivity of Deep-C research and education, "the nature of the Deep-C project – the issues involved in understanding and protecting ecological communities in the Gulf of Mexico – provides rich opportunities for engagement with K-12 teachers and students and with college-level students." Ippolito continues, "we can help promote science education in tangible ways, and share some of the wonder and awe of scientific discovery."

Click on these links to read more about the:

- Deep-C ROV Competition
- Experimental Radar Student Team
- Deep-C research

Adapted from a longer article. Original article published here.







Top: Reed Dudley from Lake Weir High School (Ocala, FL) deploys his team's ROV for the start of Mission I at the Deep-C Student ROV competition. Photo credit: Tina Miller-Way

Middle: Team Santa Rosa's ROV targets a lionfish during the Deep-C ROV competition at Dauphin Island Sea Lab. Photo credit: Tina Miller-Way

Bottom: Team Lake Weir delivers their design presentation that included details on the withinschool competition. Photo credit: Tina Miller-Way

7 Questions Interview with Dr. Felicia Coleman

Florida State University

1. Tell us a bit about DEEP-C. What are the goals and what knowledge gaps will the program fill?

The Deep-C Consortium focuses on the interplay of the geomorphologic, hydrologic, and biogeochemical settings that influence the distribution and fate of the oil and dispersants released during the Deepwater Horizon (DwH) disaster. The overarching goals are to answer these key questions: (1) What are the magnitudes, directions, and spatial and temporal scales of hydrodynamic processes that transport particles and dissolved substances (including pollutants, nutrients, and organisms) from the deep Gulf to the Florida Panhandle shelf waters in the northeastern Gulf of Mexico, and how are these influenced by canyon and shelf topography? and (2) How does the transport of these particles and dissolved substances influence geochemical, biological, and demographic processes and food web dynamics across seafloor, pelagic, and nearshore ecosystems?

The combination of earth system and food web models provides a powerful tool set that can be used to investigate and forecast environmental impact scenarios, and to assess influences of hydrocarbon releases on fisheries, tourism, and human health. And making the connection between the productivity of the region (including the impacts of hypoxia, harmful algal blooms, fishing, habitat loss, and other anthropogenic impacts) and the physical oceanography of the system is a major outcome. The models also provide an important tool for focusing on data gaps that, if filled, address substantive questions about natural resource productivity, a key to both economic and ecological health. That's the broad view.

2. What is your background and how did that lead you to become the Scientific Director for DEEP-C?

I'm trained as a marine ecologist with emphases on physiological and behavioral ecology of fishes, with some background in both physical and biological oceanography. This expertise drew me into two arenas: the community ecology arena – trying to understand that invisible fabric of nature that is woven by the interrelationships among different species and how they are influenced by the physical milieu in which they live, and the policy arena in fisheries management through service in a number of capacities on the Gulf of Mexico Fishery Management Council and other agencies responsible for managing fisheries and habitat. This interplay of interests and expertise I feel led me to develop a broader view of where all the pieces of the puzzle fit together. I think that Eric Chassignet, the Principle Investigator (PI) for the Deep-C project, and I recognized early on that our different areas of expertise complemented each other perfectly, we enjoyed interacting, and we had incredible colleagues with whom to work. That made it an easy sell for me.

3. What are the most significant and/or exciting scientific results of the DEEP-C project so far?

These are some key features:

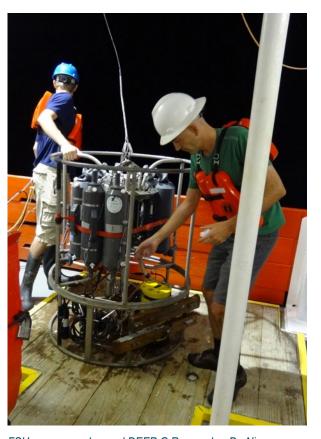
- 1. We learned that current oil detection methods are insufficient for detecting some chemicals, which can hinder our understanding of the size of a spill, our accounting for "missing" oil, and our ability to protect marine organisms that may be sensitive to specific chemicals.
- 2. We learned that a large amount of oil mixed with sediment and plankton (including diatoms, as revealed through DNA analysis) to form clumps (the so-called "dirty blizzard") that sent contaminated sediments to the sea floor at 10 times the normal rate, while creating unusually clear water closer to the surface.
- 3. We learned that oil-eating microbes regularly biodegrade oil-derived compounds that occur naturally on the seabed. While they also biodegraded oil from the DwH spill, their population size is proportional to the supply of oil, with a lag time at either end. That is, when an oil spill first occurs, the oil-degrading microbial population is relatively low, not large enough to degrade the oil before it causes ecological and/or economic damage.
- 4. Approximately a third of the carbon released during the DwH oil spill was methane. Certain bacteria (methanotrophic) that are exceptionally good at absorbing or consuming methane are, in turn, eaten by plankton and other aquatic organisms. However, methane is non-toxic and does not represent a safety risk.

...continued from previous page

- 5. The thousands of fish and invertebrates collected in the deep sea (200 to 2600 m depths) lead us to uncover new species, define deep-sea community structure, and understand life history traits of animals that are otherwise actually or virtually unknown to science.
- 4. Transferring information from scientists to policy makers is a topic that you've spent some time on. In your opinion, what are the most effective ways of accomplishing this?

Learning how to give the take-home message up front, simply, and to the point. Don't make them wait. Don't make them seek an interpreter. Don't make them question what you mean. The two biggest hurdles for scientists to overcome are (1) accepting the critical role they play in the policy arena and (2) understanding the arena in which the policy maker operates. I would say that we scientists have a duty to put our science out in these arenas. Steven Schneider, the late, great climate scientist from Stanford University, said it best, "staying out of the fray is not taking the moral high ground, it's passing the buck." The policy maker needs to make decisions now. Give that person the best scientific advice you can so that they can make informed decisions.

5. DEEP-C has been very active in education and outreach to the public. Can you tell us about some of these activities? What role or value do you see education and outreach having within DEEP-C and GoMRI as a whole?



FSU oceanographer and DEEP-C Researcher Dr. Nico Wienders works during the night to prepare a CTD cast. Water samples will provide data on temperature, salinity, oxygen, and pressure. RV Pelican (Photo credit: Kevin Speer, FSU)

I would say that in addition to the policy-related work that we have done with state and federal agencies, NGOs, and politicians, we have focused on providing rich opportunities for scientists to engage teachers, graduate and undergraduate students, and K-12 students in virtual or real research. From public Café lectures and classroom visits, to hands-on instrument development, and at-sea experiences, we (the collective GOMRI we) have covered it all. Having this as a focus area has gone far to increase public understanding of where we are in terms of understanding what happened as a result of the oil spill and even increasing their appreciation of how little we knew about the Gulf, particularly in the deeper stretches.

We scientists – from GOMRI and beyond - have two critical outreach components to our jobs. One is to instill in our students, our communities, and the general public some level of the wonder and awe we feel in discovery and to transform their view of the natural world so that they understand, appreciate, and support scientific endeavors. The other, though not often communicated as such, is to put ourselves in the policy arena without waiting to be asked. If we are not doing these things, we are not doing outreach.

6. What would you like to see GoMRI accomplish over the 10 years of the program?

GoMRI is in a remarkable and unprecedented position to help push forward the integration of natural and social sciences. I would like to see that the research funded by GOMRI not only improves our understanding of this oil spill, but that it reveals how the coupled natural-human Gulf of Mexico ecosystem responds to all manner of perturbation. In so doing, GoMRI could serve as a guidepost for starting the long and complex job of reversing the environmental degradation that has gone on in the Gulf for over a century, in hopes of avoiding an irreversible tipping point.

7. If funding were not an issue, what you would add to DEEP-C? And to GoMRI?

We need to involve social scientists from disciplines ranging from history and law to economics and human health. And the data they provide needs to be integrated into our models so that the questions we ask are more realistic, so that forecasts we make are more robust. In short, what I would like to see is much greater integration across consortia and a bigger focus on the human dimension. Most of the coupling that has gone on has come about in an ad-hoc manner by individuals seeking out one another as they start to answer particular questions that require a particular knowledge base. Fine way for us to have started. But as we've matured, it has become painfully obvious that we need a concerted effort to move this approach forward. We can't ignore this because the size of the human footprint on the Gulf . . . on the planet . . . is profound.

Making Your Science Matter when the Stakes are High: Highlights from the Deep-C/COMPASS Policy Communication Workshop

This one-day workshop focused on helping scientists to improve their communications with media and policy makers. Special attendees included aides from the offices of US Senator Bill Nelson (FL) and FL Representative Michelle Rehwinkel Vasilinda, science journalists David Malakoff (*Science* Magazine) and Mark Schrope (freelance), and Steve Bortone (Executive Director Gulf of Mexico Fishery Management Council). These individuals interacted freely, candidly, and with humor, talking about their day-to-day life, the challenges and constraints they face in their work, and what they need from scientists.

The workshop included activities to help the participants improve their communication with policy makers and the media: creating and delivering short, targeted science messages; and taking part in mock scenarios (including congressional briefing and TV/radio interviews). The workshop was co-hosted by the <u>DEEP-C Consortium</u> and <u>COMPASS</u>.



Workshop participants practice their 60-second messages. Photo Credit: Maggie Dannreuther

A few "Lessons Learned" from the Workshop:

- Targeting your message is important: try to connect with a more specific audience than "the public."
- The data does not speak for itself; follow up a discussion about results by answering the question "What does this mean for my audience?"
- Don't use jargon, details, or caveats.
- Developing relationships is the BEST way to get your science out to legislators (through their staff) and specific media.
- Have 60-second messages ready (for different audiences) so you can respond quickly if called or an opportunity arises.
- Understand that the schedule of policy makers and journalists is lightning fast compared to academia.
- Know that you have power to direct the conversation with the media, so bring the topic back to what you know.

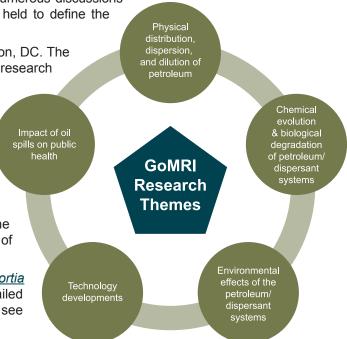
The Five GoMRI Research Themes

GoMRI research is founded on five research themes. In 2010, numerous discussions and three important meetings open to public participation were held to define the GoMRI intellectual themes.

 The first meeting was convened on May 19, 2010 in Washington, DC. The meeting included approximately 40 leaders from major ocean research institutions, with strong representation from Gulf Coast States.

- The second meeting was held on June 3, 2010 at Louisiana State University in Baton Rouge, LA. This meeting included about 200 researchers and was convened to address both short-term response actions and long-term monitoring and understanding of environmental impacts.
- The third meeting was held June 22-23, 2010 at New Orleans, LA. Over 300 participants attended. The meeting addressed public health impacts and responses to them in the short- and long-term, including monitoring and surveillance of potentially affected populations.

The research is currently being carried out by <u>eight research consortial</u> and <u>19 individual/small group investigators</u>. For more detailed descriptions of the five themes and their development, please see the <u>GoMRI website</u>.



Frequently Asked Questions by Dr. Chuck Wilson

Dr. Chuck Wilson, Chief Scientific Officer for the Gulf of Mexico Research Initiative (GoMRI), answers a few of the most frequently asked questions about the program.

1. Who is doing the research that's funded through GoMRI?

The research is primarily being conducted at academic institutions in the US Gulf Coast States. However, given the global nature and size of the Deepwater Horizon oil spill, those institutions have partnerships with other institutions based across the US and internationally. To date, GoMRI funding involves over 150 universities/institutions; 38 states; eight countries; and over 1,400 researchers, students, and staff.



2. How much funding has been given out already?

To date, there have been four Grant sets (all are closed):

- a. Block Grants provided directly from BP to Gulf State Institutions and a conditional gift to the National Institutes of Health to establish critical baseline data (Announced June 2010) \$45 million
- b. Bridge Grants for sampling continuation (announced July 2011) \$1.5 million
- c. Consortia Grants (announced August 2011) \$110.5 million
- d. Investigator Grants (announced August 2012) \$18.6 million

The Research Board expects to release another funding opportunity in mid-November 2013 for GoMRI Research Consortia and a RFP for individual and small research group investigations will be forthcoming in late 2014. For more information about this, you can see the <u>announcement</u> on the GoMRI website.

3. How will GoMRI's work relate to the National Academies of Science's (NAS) funding for oil spill research in the Gulf of Mexico as a result of the Deepwater Horizon incident?

The NAS is separate from GoMRI and they are currently developing their own plan and program. However, there is a continuum of research needs and the GoMRI and NAS each have a unique place on this continuum. It is incumbent upon both programs, as well as the various federal and state agencies supporting post spill research, to work to ensure that there are not large gaps in the research. It is vitally important that we all work to share the findings of our research programs with each other and to make certain that research findings are being provided to decision-makers charged with restoring the Gulf, protecting public health, and reducing future risks from energy development.

GoMRI gives Special Award at the 2013 Intel International Science & Engineering Fair

GoMRI awarded a Special Award at the 2013 Intel International Science & Engineering Fair (ISEF) for best project in oil spill related science (with a preference for projects focusing on the ocean or coasts). The \$3000

award was presented to Abdullah Koca and Omer Altun of Konya, Turkey for their project entitled Oceans are More Significant than Petroleum.

Abdullah and Omer worked to find an effective, ecologically pure and cheap way to recover petroleum from water. They tested natural materials such as chicken feathers, goat hair, and pumpkin seed shells. Their results indicated that chicken feathers, which are currently thrown away in the US food industry, were the most efficient material, absorbing 98% of the spilled petroleum. The students also calculated the costs that could be recovered if the petroleum was then extracted from the feathers and continued to be used. The students concluded the economic benefit INSPIRED TO CHANGE of removing the petroleum from the

waterways was more significant than the potential cost savings of being able to reuse the recovered petroleum.

Every year more than 1,500 student finalists from 65 countries, regions, and territories around the globe earn the right to attend the Intel ISEF by

> winning an Intel ISEF-affiliated fair at a local, regional, or national level. Finalists in 2013 competed for more than \$3 million in total awards; competitors were judged on their creative ability and scientific thought, as well as the thoroughness, skill, and clarity shown in their projects.

This was the GoMRI's second year participating as a Special Awardee. Special Awards given in specific disciplines encourage study in these specific fields among high achieving high school students around the world and contribute to building the future work force that will be solving problems related to GoMRI-type research. GoMRI congratulates Abdullah and Omer on their excellent work!

a program of — SOCIETY FOR SCIENCE & THE

OUR WORLD.



Winners of the GoMRI ISEF Award, Omer Faruk Altun (L) Abdullah Koca (2nd-L) from Private Merve Buyukkoyuncu Science High School, Konya, Turkey stand with other award winners at the ISEF in Phoenix, AZ.



Request for Proposals for 2015-2017 GoMRI Research Consortia

GoMRI is pleased to announce the development of the Request for Proposals (RFP) for 2015-2017 GoMRI Research Consortia. The purpose of the 2015-2017 GoMRI Research Consortia RFP, to be released in mid-November 2013, is to select the research activities for GoMRI Years 5–7 (1 January 2015–31 December 2017) involving Research Consortia, defined as a contractual arrangement between a PI and co-PIs at four or more institutions. The total funds available for distribution to Research Consortia through the 2015-2017 GoMRI Research Consortia RFP will be approximately \$35 million per year. A RFP for individual and small research group investigations will be forthcoming in late 2014. For more details, please see the GoMRI website.

2015-2017 GoMRI Research Consortia RFP Timeline (subject to change):

- November 15, 2013 –2015-2017 GoMRI Research Consortia RFP release
- January 15, 2014 Pre-proposal deadline
- January 16-March 3, 2014 Pre-proposal review and feedback
- June 2, 2014 Full proposal deadline
- November 14, 2014 Award announcement
- January 1, 2015 Award start date

