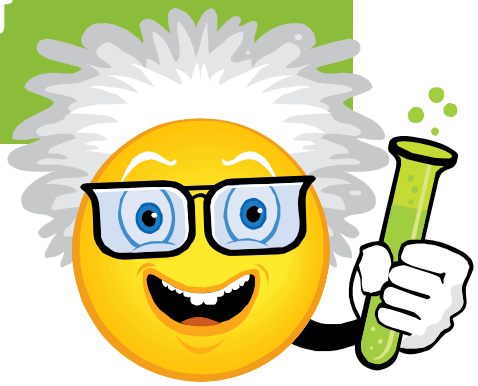
summer 2009

eri education

Science engagement



ERI is currently expanding its science engagement activities, encouraging young people to get involved in science, technology, engineering and maths (STEM), together with a wider engagement of the local community. Co-ordinated by Dr Kathleen McDougall, ERI's current school-link activities include hosting Nuffield School Science Bursary Studentships, hosting school lab visits, providing support for science projects, field trips and other school and community events. The Institute also runs a public seminar series throughout the year, with both local speakers and invited speakers from around the country. ERI aims to expand its science engagement activities through the national STEM network (STEMNET), facilitated locally by Highlands and Islands Enterprise (HIE) in Inverness, with training and support via the STEM Ambassador programme. A recent Scottish Government Science Engagement grant will also fund public engagement training across UHI, in conjunction with Edinburgh Beltane Beacons for Public Engagement.

For further information, please contact Dr Kathleen McDougall at Kathleen.McDougall@thurso.uhi.ac.uk or Dr Kenneth Boyd at Kenneth.Boyd@thurso.uhi.ac.uk

Nuffield School Science Bursaries

Each year a number of students from 5th year at Thurso High School come to ERI to carry out a Nuffield Science Bursary project during the school summer holiday. These 5-6 week projects provide experience of hands on science, working in a research lab environment. The students complete their own research project which is written up as a short report. Bursary students also have the opportunity to attend a national Nuffield event to present a poster on their work to fellow students.

Nuffield Bursary student James Ashpool at work in the lab

Work experience

ERI offers work experience to students of all levels, including high school students and university students during their summer vacation. This summer Kirsty Fraser, a 5th year student from Thurso High School spent a week shadowing research staff and students at ERI. This provided the opportunity to experience a wide variety of different scientific activities together with related aspects of working in a research environment.

Work experience student Kirsty Fraser in the lab with Dr Angus Jackson .

School activities

Staff and students at ERI are keen to participate in school activities, both in the lab and field. Previous events include hosting school visits to ERI and participating in field trips such as Wick High School's Seashore Safari, part of healthy living day at the school. Earlier this year, engineering students on placement at ERI also assisted with a Wind Power day at Thurso High School where 2nd year students from Thurso and Farr learned about renewable energy and designed a wind turbine.

Dr Kathleen McDougall of ERI with staff and students from Wick High School.

Student placements

ERI hosts a number of placement student each year from other educational establishments throughout the world. ERI offers a variety of placements ranging from a few weeks to several months, giving students the opportunity to work on their own research project and to experience life in a new country. For many students this placement is a great opportunity to use and improve their English language skills. Recent placement students have come to ERI from Taiwan, the Czech Republic and France.

French engineering students Alex Rosenbaum and Julien Martagon working at sea on the ERI Aurora.

Student testimony

Name: **Jiang, Jheng-Jie (Jay)**

Organisation: National Sun Yat-sen University
Department of Marine environment and Engineering

Nationality: **Taiwan**

Dates of visit: 13.3.2009 ~ 11.6.2009

About why you came …….

My supervisor actually came to visit ERI last year, and at that time we have signed a collaboration of contract with each other. After that, with the help from Yen-Fu, we start to organise our visit. Fortunately, we could get funding from National Science Council in Taiwan. We hope to learn the expertise and experience from ERI and get some training related to "the presence of human pharmaceuticals in the environment", which may include sampling of natural waters and the effluent of sewage treatment pants, developing and optimizing analytical techniques, degradation studies and determination of these compounds in a range of environmental matrices.

About your project & working at the ERI …….

Our project works on the presence of human pharmaceuticals in the environment. As mentioned above, ERI not only provide each of us a supervisor from their team of senior and junior investigators and provide us with workspace, other research-related support and laboratory instruments as needed, but also share the expertise and experience with us. We do have really learned lots of knowledge from ERI. In addition, based on the difference between American English and British English, sometimes we have to adapt our American English to local here, and this is also a quite interesting experience. Honestly, we are quite interested in this.

About living in Caithness …….

Where I came from is a big city, and live in Caithness truly let us realize what and how it feels like to stay in a small town. People always are friendly here, no matter that you know each other or not. There are also some activities in ERI, such as Friday night drinking, Golf, football games, etc, and staffs here are always welcome everyone to join.

About your future …….

During this visiting, it really encourages us from continuing not only in science and research, but also living and working in Scotland. We will use the knowledge we have learned from ERI to carry on the study in Taiwan about the presence of human pharmaceuticals in the environment. Also, by our visit, we hope not only further strengthen this collaboration in the field of emerging contaminants and ecotoxicology, but will lay a milestone of the long term collaboration between our laboratories.

Community events

STEM ambassadors from ERI attended the Caithness County Show in Wick on Saturday 18th July 2009, bringing a marine theme to the agricultural show. With display tanks and touch tanks, show goers were introduced to marine life from the rocky shore including crabs, fish, limpets, winkles, whelks, sea anemones, sea hares and seaweed, first hand. There were also display materials about some related aspects of research at ERI, including the extraction of novel compounds from seaweed and the use of crab shell to remove heavy metals from waste water.

STEM ambassadors: Martina Burtscher, Kathleen McDougall, Robbie Mutton, Angus Jackson, Angela Squier and Irina Foss

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