

NRN-LCEE Research Development Fund Award

Redesigning Resilience: Ancient Remedies for Modern Problems Workshop

Myddfai Visitor Centre, 4 -5th July 2017

Lead organisation and contact:

Dr Rowena Jenkins, Cardiff Metropolitan University, rojenkins@cardiffmet.ac.uk

Partner organisations and contacts:

Dr. Geertje van Keulen Swansea University
Dr. Matt Lewis Bangor University
Dr. Stephanie Wilson Bangor University
Dr. Rhys Dafydd Jones Aberystwyth University
Dr. Tom Powell Swansea University & Bevan Commission
Dr. Diana Luft University of Wales Centre for Advanced Welsh and Celtic Studies and the National Library of Wales

Summary:

Resilience within our society is key to reducing future risks, such as antimicrobial resistance seen in infectious disease and extreme events due to climate change. When addressing risk and resilience, much can be learnt from risk mitigation measures used in the past. "Redesigning resilience" aims to understand the roles of historic medicine traditions and folklore in creating resilient communities, with applications to increasing, or perhaps restoring, resilience in these communities for the future.

NRN-LCEE funded a 2-day workshop 4-5th July 2017 to bring together researchers to identify the value that ancient texts could add to key interdisciplinary challenges. The workshop aimed to establish novel working links between researchers from varied backgrounds, including; chemists, microbiologists, environmental risk analysts, ethnobotanists and key industry stakeholders. The workshop acted as a platform from which attendees could outline their expertise, areas of research interest and ideas on how ancient texts could be utilised to address the challenges already identified.

Participation:

The workshop was promoted via Eventbrite and was promoted at two UK network events, Science and the Assembly 6th June 2017 and 'Empowering Welsh researchers to tackle antimicrobial resistance (AMR): Developing novel therapeutic approaches, understanding resistance and working with stakeholders' 12th June 2017. (Advertised anywhere else?). The Eventbrite site had 199 views.

More than 25 people registered for the workshop, the delegates in attendance represented academia, research, NHS, industry, government organisations. The workshop took the format of invited lectures on the first day, broadly following three themes, (microbial resilience, extreme climate drivers and community resilience). Time was allocated at the end of each series of talks for a question and answer session. Following the first day conference session a conference dinner was held at a local hotel to help further break the ice and to allow people to discuss ideas more broadly.

The second day started with a tour of Myddfai given by Sheikh Ahmed (Director Myddfai Community Centre) who highlighted the significance of the myddfai texts and the medical history of the village. This was followed by a keynote talk from Dr Ruth Dawson (The Conversation) about how to communicate research ideas to a more general audience. The rest of the day was broken into small group breakout sessions to allow delegates to further discuss ideas and future joint ventures/funding sources. The microbial resilience theme was particularly well represented with participants from research and industry registering their interest and a contribution from an international team the Quave Laboratory (<http://etnobotanica.us/>) via skype opening avenues for new collaborative projects.



Back row left to right: Mr Ivan Hutchinson (Cardiff Metropolitan University), Mr James Delaney (Swansea University), Mr Tom Powell (Bevan Commission), Ms Gwawr Davies (Swansea University), Dr Helen Brown (Cardiff University), Dr Matt Lewis (Bangor University), Dr Sofia Anthi Vougioukalou (Cardiff University). Front row left to right: Diana Luft (University of Wales Centre for Advanced Welsh and Celtic Studies and the National Library of Wales), Dr Emma Hayhurst (University of South Wales), Dr Rowena Jenkins (Cardiff Metropolitan University), Dr Geertje van Keulan (Swansea University), Mr Martin Hughs (PPI).



Keynote speakers: Left - Prof Richard Marggraf Turley (Aberystwyth University), Right – Mr Kevin Stephens (Bioextractions). Missing Ms Ruth Dawson (The Conversation).

Outcomes and next steps:

It was concluded that within the overall theme of resilience there were natural divisions that could potentially need separate funding sources. Lessons learnt from ancient flooding to prevent future disaster, patterns in extreme weather events and ancient roles of salt marshes, kelp forests, mangroves, risk prediction as one theme. Historical texts to support future antimicrobial remedy development as the second. Both using the ideas suggested above to involve communities and engage with 'inherited knowledge'.

- **Participation and contribution:** 25 participants (30 registered). 18 contributions (3 Key note and 14 short talks and 1 tour of myddfai).
- **Keynote Speakers:** Mr Kevin Stephens (Chief Executive Officer of BioExtractions), Professor Richard Marggraf Turley (Professor of Engagement with the Public Imagination, Aberystwyth Univeristy), Ms Ruth Dawson (Wales Editor of The Conversation).
- **14 institute and businesses were represented at the workshop:** Cardiff Metropolitan University (Biomedical sciences), Bangor University (Centre of Applied Marine Sciences), Cardiff University (School of Pharmacy and Pharmaceutical Sciences; School of Dentistry; School of healthcare Sciences), Aberystwyth University (Department of English & Creative Writing; Department of Geography and Earth Sciences), University of South Wales

(Faculty of Computing, Engineering and Science), Swansea University (Medical School), University of Wales (Centre for Advanced Welsh & Celtic Studies; National Library of Wales), Emory University (Antibiotic Resistance Center), NHS Patient and Public Involvement representative, Myddfai Ty Talcen Limited, Bevan Commission, Horritt Consulting, NEEM Biotech Ltd, BioExtractions Ltd.

- Collaborative Developments: The overall observation from the attendees was that across all the themes there is a case for encouraging communities to take responsibility for one another. To look into how this could be progressed it was suggested that it might be possible to ask communities to share their stories, for example 'about home remedies family members used to suggest' and whether they are still used, do they differ between communities. There were suggestions that collaborating with George Ewart Evans Centre for Storytelling at the University of South Wales Centre might open avenues into lost knowledge if community story telling could be established across select area of the country. Specifically the workshop brought together several groups that have not traditionally worked together, there are now several new potential collaborative relationships, for example; Dr Helen Brown, Dr Emma Hayhurst and The Bevan Commission were interested in working with Dr Sofia Anthi Vougioukalou looking at community knowledge from varied populations across Wales, a standardised questionnaire might need to be developed for this purpose. In addition to this links were made between Dr Jenkins, van Keulan, Luft and BioExtractions Ltd with a view to investigate potential medicinal remedies.
- Summer Students: Three summer students (Mr Ivan Hutchinson, Mr James Delany and Ms Gwawr Davies(have been supported by The Microbiology Society, Swansea University and Cardiff Metropolitan University) are working on producing pilot data about the antimicrobial activity of some of the recipes translated from the Physicians of Myddfai books (collaboration between Diana Luft, Rowena Jenkins and Geetje van Keulan).
- Online and Social media presence: The workshop was well reported by attendees via twitter and a twitter handle @redresADL was established to report on the meeting and also to continue to interact with the wider public on the themes presented at this workshop.
- Swansea Science Festival 8-10th September: Findings so far will be presented as part of Swansea Science Festival, where members of the public will be asked to recreate one of the ancient remedies (<http://www.swansea.ac.uk/swanseasciencefestival/>). The public will be encouraged to volunteer any remedies they have heard of/used by tweeting @redresADL.

Future funding opportunities:

From the workshop we are working towards preparing two collaborative bids one based on; - Celtic evidence of medicine for historical and current use, involving community transfer of knowledge/resilience. The second bid would be for a project to look into Celtic evidence for community knowledge and response to extreme weather events with a focus on preventing future flooding (Documents/knowledge on roles of salt marches mangroves, kelp forests). Dr Rowena Jenkins, Dr Matt Lewis and Dr Geertje van Keulan are looking into suitable funding streams.