



Medicine and the Natural Environment

Successful Multidisciplinary Research in Southampton

Dr. Jörg Wiedenmann, Coral Reef Laboratory (OES)

Collaboration partners in OES/NOCS and Medicine



Achterberg



Hauton



Mills



Moore



Palmer



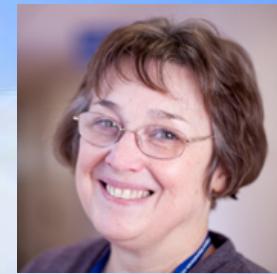
Teagle



Trueman



Wiedenmann



Davies



Elliott



Hunt



Postle



O'Kelly



Oreffo

Collaboration partners in OES/NOCS and Medicine



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Oreffo



**Undergrad.
Students**

PhD Students

Postdocs

**Adanced
Researchers**

Start-up Funding and Support



Achterberg



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O'Kelly



Oreffo

**“NOCS-SoM
Interface Fund”
“Bridging the Gap”
“NERC / GSNOCS”
“VC-Award”
IFLS / SMMI**

Facilities and Techniques



Achterberg



Hauton



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Davies



Elliott



Moore



Palmer



Hunt



Postle



Teagle



Trueman



Wiedenmann



O'Kelly



Oreffo

Cell Culture
Aquarium Facility
Analytical Chemistry
Mass Spectrometry
Molecular Biology
Biochemistry
Imaging

Case Studies



Hauton



Elliott

**NOVEL PATHOGEN RECEPTOR PROTEINS (PRPS)
IN MARINE INVERTEBRATES**

Case Studies



Wiedenmann



O'Kelly



Elliott



Oreffo

**ENGINEERED CORAL PIGMENTS AS ADVANCED IMAGING
TOOLS FOR BIOMEDICAL RESEARCH**

Case Studies



Trueman



Oreffo

EFFECT OF VITAMIN D DEFICIENCY DURING PREGNANCY ON OFFSPRING BONE STRUCTURE, COMPOSITION AND QUALITY IN LATER LIFE

Case Studies



Mills



Moore



Postle



Hunt

**NOVEL SEDIMENTARY BIOMARKERS BASED ON PHOSPHORUS
REPLACEMENT IN DIATOM LIPIDS**

Case Studies



Wiedenmann



Achterberg



Postle



Hunt

UNDERSTANDING CORAL BLEACHING AND HEAT STRESS TOLERANCE: A LIPIDOMIC APPROACH

Case Studies



Palmer



Teagle



Davies

**HEALTH EFFECTS OF TRANSITION METALS IN
PARTICULATE AIR POLLUTION**

Outcomes: Funding

Wiedenmann (2012-2017)

INCORALS: Influence of nutrient starvation on coral bleaching.

ERC Starting Grant: €1.29 Mio

Wiedenmann, Achterberg, Postle (2013-2016)

Understanding the exceptional heat tolerance of reef corals from the Persian/Arabian Gulf.

NERC Standard Grant: £ 0.47 Mio

Davies, Palmer, Teagle (2009 - 2013)

Novel Pathgen Receptor Proteins (PRPS) In Marine Invertebrates.

MRC Integrative Toxicology Training Partnership Grant: £ ~70 k

Hauton, Elliott (2012- 2013)

Novel Pathgen Receptor Proteins (PRPS) In Marine Invertebrates.

NERC NBAF Pilot Study: £ 6 k

Outcomes: Publications

Wiedenmann, D'Angelo, Smith, Hunt, Legiret, Postle, Achterberg (2012). Nutrient enrichment can increase the susceptibility of reef corals to bleaching. **Nature Climate Change 3, 160-164.**

Lanham, Roberts, Habgood, Alexander, Burne, Eyles, Trueman, Cooper, McGrath and Oreffo (2013). Effect of vitamin D deficiency during pregnancy on offspring bone structure, composition and quality in later life. **Journal of Developmental Origins of Health and Disease 4, pp 49-55.**

Loxham, Cooper, Gerlofs-Nijland, Cassee, Davies, Palmer, Teagle (2013). Physico-chemical Characterization of Airborne Particulate Matter Found at a Mainline Underground Railway Station. **Environmental Science & Technology. DOI: 10.1021/es304481m**



“...To achieve a step change in the scale and performance of our research in ways that fully exploit our capabilities and infrastructure...”

University Strategy