NCCOS
NATIONAL CENTERS FOR
COASTAL OCEAN SCIENCE

Ecotoxicology Branch
Stressor Detection and Impact Division
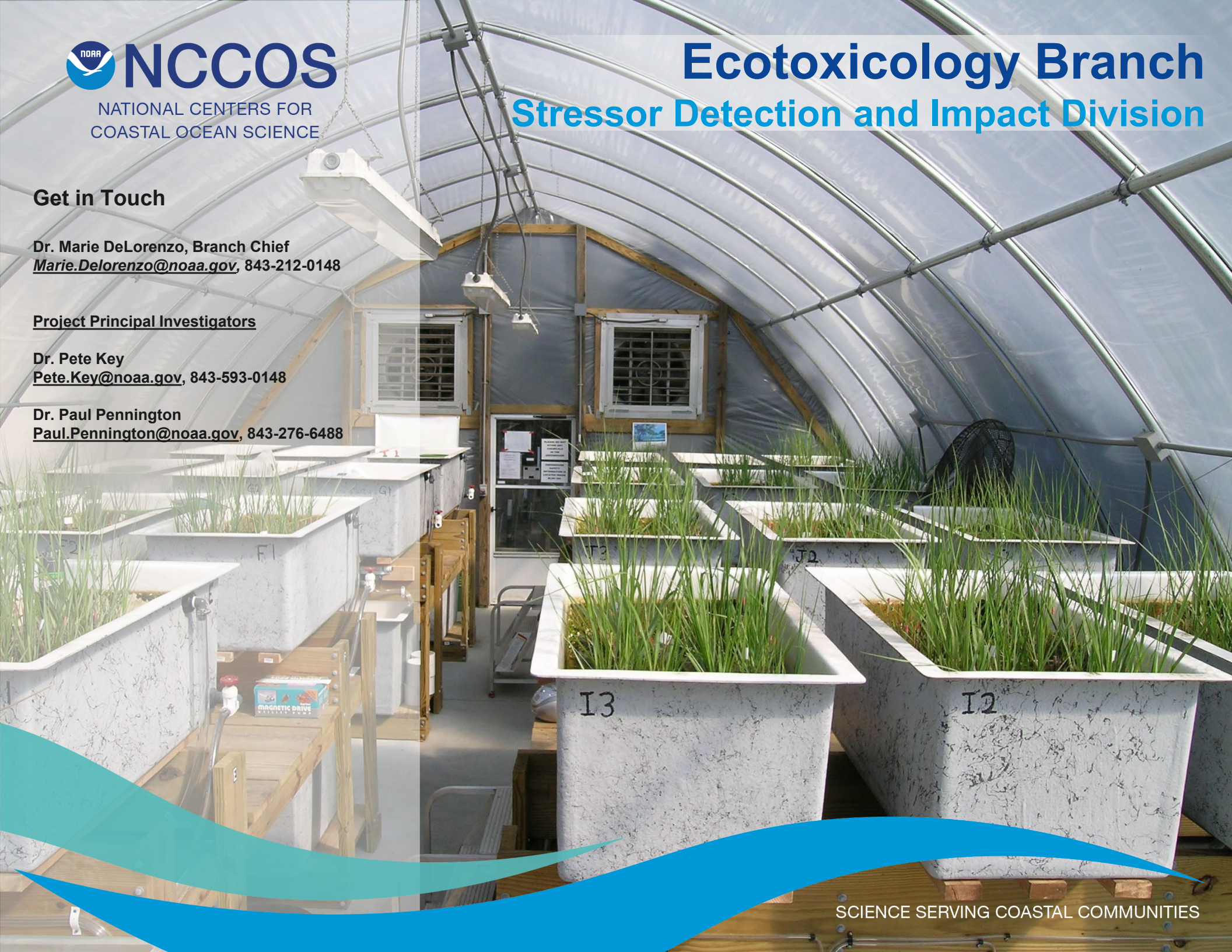
Get in Touch

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SCIENCE SERVING COASTAL COMMUNITIES

Capabilities

- Acute and chronic toxicity testing with estuarine fish and invertebrates
- Cellular and molecular biomarkers of chemical exposure and effects
- Aqueous and sediment exposures
- Bioaccumulation testing
- Multistressor experiments to assess contaminant toxicity under variable temperature, salinity, UV light, etc.
- Mesocosm testing to assess chemical fate and effect in simulated tidal saltmarsh ecosystems
- Analytical instrumentation includes ICP-MS, Direct Mercury Analysis, GC/MS, LC/MS
- Inorganic and organic contaminant quantification in various matrices including water, sediment, and tissues
- Legacy contaminant classes: metals, PCBs, organochlorine pesticides, PAHs
- New classes of contaminants such as PFAS, pharmaceuticals and other personal care products, musk compounds, organic anti-foulant biocides, organic UV filters (sunscreens), PBDEs, 6PPD
- Quantification of various constituents of fresh and weathered crude oil

Research Priorities

- Determine bioeffects associated with environmental pollution
- Develop sublethal indicators of contaminant exposure and stress
- Evaluate impacts of priority contaminants, contaminant mixtures, and multiple stressors
- Improve risk assessments for environmental and human health
- Develop sensitive analytical methods for identification and quantification of emerging environmental chemical pollutants
- Characterize chemical transport and fate
- Support national and regional chemical contaminant assessments
- Provide science to support NOAA's mandate for spill response and restoration

Mission

Conduct research to evaluate and predict the effects of chemical contaminants and other environmental stressors on coastal ecosystems

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