

Designing and Implementing Systems for Early Warning and
Evaluation of the Toxicity of Harmful Algal Blooms in the
Caribbean Region, Applying Advanced Nuclear Techniques,
Radioecotoxicological Evaluations
and Bioassays (ARCAL CXVI)
RLA/7/014

**Group Fellow Training Course on the Receptor Binding Assay Method for the
Monitoring and the Quantification of PSP and CFP Toxins in Fish and Shellfish
Samples**

Center for Coastal Environmental Health and Biomolecular Research; Marine Biotoxins Programme, Charleston
SC, United States of America
19 – 30 March 2012

Organized and sponsored by the International Atomic Energy Agency (IAEA) in cooperation with the National
Oceanic and Atmospheric Administration (NOAA).

Group Fellow Training Course Agenda

Training Program Agenda (19th March – 23rd March) - PSP

	Monday, 19th March	Tuesday, 20th March	Wednesday, 21th March
MORNING	<p>Welcome, Introduction, Logistics</p> <p><i>Classroom</i></p> <ul style="list-style-type: none"> Discussion of weekly schedule Assay background/principles Specifics of assay Discussion of protocol <p><i>Laboratory</i></p> <ul style="list-style-type: none"> Use of equipment - Laboratory Tour Preparation of assay buffers 	<p><i>Laboratory / Classroom</i></p> <ul style="list-style-type: none"> Preparation of bulk standard curve <p><i>Laboratory</i></p> <ul style="list-style-type: none"> PSP receptor assay set-up #1 Preparation of QC standard solution Preparation of daily standard curve 	<p><i>Laboratory</i></p> <ul style="list-style-type: none"> Repeat PSP receptor binding assay (#2) Dilutions of sample unknowns
LUNCH			
AFTERNOON	<p><i>Laboratory</i></p> <ul style="list-style-type: none"> Demonstration of PSP receptor binding assay Filtration and counting Data analysis 	<p><i>Classroom</i></p> <ul style="list-style-type: none"> Preparation of rat brain membrane Discussion of laboratory activities Data analysis Assay results 	<p><i>Laboratory</i></p> <ul style="list-style-type: none"> Tissue linearity Protein assay <p><i>Classroom</i></p> <ul style="list-style-type: none"> Discussion of laboratory activities Assay results Troubleshooting techniques
EVENING	OPEN	OPEN	OPEN

Training Program Agenda (19th December – 23rd December) - PSP

	Thursday, 22nd March	Friday, 23rd v
MORNING	<i>Laboratory</i> Repeat PSP receptor binding assay (#3) for sample unknowns	<i>Classroom</i> Review and discuss receptor assay results Evaluation and discussion of inter-assay variability Wrap-up session Questions/discussion Follow-up technical support Plans for receptor assay implementation
LUNCH		
AFTERNOON	<i>Laboratory</i> Shellfish extracts (hands-on) <i>Classroom</i> Discussion of laboratory activities Assay results Troubleshooting techniques	<i>Classroom</i> Continue wrap-up session, if necessary.
EVENING	OPEN	OPEN

Training Program Agenda (26th March – 30rd March) - CFP

	Monday, 26th March	Tuesday, 27th March	Wednesday, 28th March
MORNING	<p>Welcome, Introduction, Logistics</p> <p><i>Classroom</i></p> <ul style="list-style-type: none"> Discussion of weekly schedule Assay background/principles Specifics of assay Discussion of protocol <p><i>Laboratory</i></p> <ul style="list-style-type: none"> Preparation of assay buffers 	<p><i>Laboratory / Classroom</i></p> <ul style="list-style-type: none"> Preparation of bulk standard curve <p><i>Laboratory</i></p> <ul style="list-style-type: none"> CFP receptor assay set-up #1 Preparation of QC standard solution Preparation of daily standard curve 	<p><i>Laboratory</i></p> <ul style="list-style-type: none"> Repeat CFP receptor binding assay (#2) Dilutions of sample unknowns
LUNCH			
AFTERNOON	<p><i>Laboratory</i></p> <ul style="list-style-type: none"> Demonstration of CFP receptor binding assay Filtration and counting Data analysis 	<p><i>Classroom</i></p> <ul style="list-style-type: none"> Discussion of laboratory activities Data analysis Assay results 	<p><i>Laboratory</i></p> <ul style="list-style-type: none"> Demonstration of CFP receptor Binding Assay in test tube format <p><i>Classroom</i></p> <ul style="list-style-type: none"> Discussion of laboratory activities Assay results Troubleshooting techniques
EVENING	OPEN	OPEN	OPEN

Training Program Agenda (26th March – 30rd March) - CFP

	Thursday, 29th March	Friday, 30th March
MORNING	<i>Laboratory</i> Repeat CFP receptor binding assay (#3) for sample unknowns	<i>Classroom</i> Review and discuss receptor assay results Evaluation and discussion of inter-assay variability Wrap-up session Questions/discussion Follow-up technical support Plans for receptor assay implementation
LUNCH		
AFTERNOON	<i>Laboratory</i> <i>Classroom</i> Discussion of laboratory activities Assay results Troubleshooting techniques	<i>Classroom</i> Continue wrap-up session, if necessary.
EVENING	OPEN	OPEN