

## Advanced Beamlines for Biological Investigations with X-rays (ABBIX) Project Quarterly Report – 2Q FY12

**DATE: submitted on 12 April 2012**

### 1. Project Schedule

Conceptual Design Review	Planned: 1Q FY12	Actual: Jan. 17-18, 2012
Preliminary Design Review, Baseline	Planned: 4Q FY12	Actual:
Final Design Review, Approve Construction	Planned: 2Q FY13	Actual:
Complete Integrated Testing Without Beam	Planned: 4Q FY15	Actual:
Complete Project Closeout	Planned: 3Q FY16	Actual:

#### Short term (3-month) schedule

- PDR document, associated cost, schedule, and other required project documents
  - Final draft
  - Post for Internal Review committee
- Internal Preliminary Design Review
- External Preliminary Design Review

Planned: May 17	Actual:
Planned: May 22	Actual:
Planned: May 29	Actual:
Planned: June 26-27	Actual:

### 2. Technical Objectives: 3 beamlines installed and ready for commissioning with X-ray beam

#### Planned NIH beamlines

AMX – Flexible Access and Highly Automated Beamline for Macromolecular Crystallography

FMX – Frontier Macromolecular Crystallography at an Undulator Beamline

LIX – High-brightness Beamline for X-ray Scattering for Life Sciences

#### Assumed Funding Profile

Funding (\$M) by Fiscal Year	FY10	FY11	FY12	FY13	FY14	FY15	Total (\$M)
NIH ARRA funding for IDs/FEs (\$M)	\$12.0						\$12.0
NIH funding for beamlines (\$M)		\$23.4	\$5.5	\$4.1			\$33.0
NSLS-II funding for Common Beamline Systems (\$M)		\$0.1	\$1.0	\$1.4	\$0.5		\$ 3.0
<b>Total Project Cost (\$M)</b>	<b>\$12.0</b>	<b>\$23.5</b>	<b>\$6.5</b>	<b>\$5.5</b>	<b>\$0.5</b>		<b>\$48.0</b>

### 3. Progress:

- External Conceptual Design Review held at BNL January 17-18, 2012
- Beamline locations
  - ABBIX insertion device and beamline locations established in a memo from Steve Dierker date February 24, which stated in part: "... the new location assignments for FMX/AMX, LIX, ... at 17-ID, 16-ID, respectively. This is substantially improved relative to the previous arrangement. It places all beamlines either directly in front of, or directly adjacent to LOB 5 and it assigns FMX/AMX to a location that has the "extended" floor space."
- Insertion devices:
  - Two 1.5m-long IVU21 undulators, for AMX and FMX, selected for procurement via options for two additional units in the SRX (NSLS-II project beamline) undulator procurement, February 2012.

- LIX insertion device: choices include (a) 2m-long IVU20-22, (b) 2.8m-long IVU23, or (c) something in between, to be determined by best-value procurement. All of these choices would meet the requirements for the planned LIX scientific program.
- Permanent beamline leader (WBS Level 2 manager) positions
  - LIX position filled February 1(Lin Yang)
  - Interviews for FMX/AMX position held, December 2011 – March 2012
- Mechanical engineering positions
  - Five interviews held in 2Q12
- Preliminary Design Report: first draft of beamline chapters received April 2

**4. Issues and Risks:**

- In order to support preliminary design efforts, continued ramp up of qualified manpower for the ABBIX project is needed in FY12.

**5. Action Items and Decisions:**

- Finalize LIX undulator parameters by May 2012, for procurement award in 4Q12.
- Fill AMX/FMX beamline leader (WBS Level 2 manager) position by April 2012.