

Roadmap Target #1: High-Throughput Screening (HTS)

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Roadmap Target #1: High-Throughput Screening (HTS)

Target Date: Begin exploratory testing mid 2005

Activities:

ASSAYS: Catalogue assays in public domain
Choice of Assays - pathways related to carcinogenicity, reproductive and developmental toxicity
Metabolism - agents that have been tested
Analyze metabolites
Test each metabolite, if possible

AGENTS: 500+ that have been tested in bioassay
HPV chemicals

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Activities:

ASSAY PROPERTIES: Reproducible

Validated

Predictive

Transportable

Span wide dose range

FUNDING:

In-house, contracts, grants, consortia

DATABASE:

Consistent with CEBS knowledge base

ANALYSIS:

Pattern recognition, systems biology approach

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Activities:

**EFFECTIVENESS OF
PROGRAM:**

Regular internal reviews

Periodic external review by Board etc.

COMMUNICATION:

Convey to public HTS vs. bioassays

Roadmap Target #1: HTS Activity Matrix

SEQUENCE	TIMELINE		
	Short-term	Mid-term	Long-term
	(‘04) Catalogue assays	(‘06) Analyze metabolites from non-conforming	(‘09) Develop universal metabolizing system
	(‘05) Workshop to select tests	(‘07) Validation of assays to predict mechanistic endpoint	(‘10) Availability of agents & tissues for HTS to extramural scientists
	(‘05) Understand metabolism	(‘07) Develop systems biology method for analysis	(‘10) Validation of battery of tests for prediction
	(‘05) Test ±600 NTP carc., developmental & reprod. toxicity agents	(‘07) Develop database as part of CEBS	
		(‘07) Review after 36 months and periodically	(‘10) Review after 5 years and periodically