State of California
AIR RESOURCES BOARD

Resolution 05-16
February 24, 2005

Agenda Item No.:05-2-3

WHEREAS, the Air Resources Board has been directed to carry out an effective research program in conjunction with its efforts to combat air pollution, pursuant to Health and Safety Code Sections 39700 through 39705;

WHEREAS, a proposal, number 05-06, entitled “A Low-Cost Ultra-fine Particle Concentration Monitor”, has been submitted by Aerosol Dynamics, Inc., in response to the 2005 Innovative Clean Air Technologies (ICAT) Program solicitation;

WHEREAS, the proposal has been independently reviewed for technical and business merit by highly qualified individuals; and

WHEREAS, the Research Division staff and the Executive Officer and Deputy Executive Officers have reviewed and recommend for funding:

> Proposal Number 05-06, entitled “A Low-Cost Ultra-fine Particle Concentration Monitor”, submitted by Aerosol Dynamics, Inc., for a total amount not to exceed $80,000.

NOW, THEREFORE BE IT RESOLVED, that the Air Resources Board, pursuant to the authority granted by Health and Safety Code Section 39703, hereby approves the following:

> Proposal Number 05-06, entitled “A Low-Cost Ultra-fine Particle Concentration Monitor”, submitted by Aerosol Dynamics, Inc., for a total amount not to exceed $80,000.

BE IT FURTHER RESOLVED, that the Executive Officer is hereby authorized to initiate administrative procedures and execute all necessary documents and agreements for the efforts proposed herein, and as described in Attachment A, in an amount not to exceed $80,000.

I hereby certify that the above is a true and correct copy of Resolution 05-16, as adopted by the Air Resources Board.

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Lori Andreoni, Clerk of the Board

ATTACHMENT A

Innovative Clean Air Technologies (ICAT) Grant Proposal:

"A Low-Cost Ultra-fine Particle Concentration Monitor"

Background

Aerosol Dynamics has proposed a compact, low-cost instrument for real-time measurement of the counts of ultrafine airborne particles. The instrument will use water as a working fluid, as opposed to the smelly and flammable butanol used in other instruments that perform a similar function. Also, it is expected to have advantages of smaller size, lower cost, reduced maintenance needs, and simpler use than other instruments.

Objective

The project is intended to demonstrate performance comparable to that of commercially available particle counters.

Methods

The ICAT project will consist of:

(1) fabrication, refinement and laboratory testing of the proposed instrument

(2) field validation versus laboratory-grade instruments at several sites in California, with instrument refinement

(3) data submittal and reporting

Expected Results

A relatively low-cost, simple, and safe particle counter should be ready for commercial production.

Significance to the Board

Researchers or organizations concerned about the nature of ultrafine PM, indoors or outdoors, would have a device that could be widely applied to monitor the number concentration of PM. If coupled with a size-discriminating device, the new instrument would allow the characterization of PM by size.

Applicant: Aerosol Dynamics, Inc. (Berkeley, California)

Project Period: February 28, 2005, to May 28, 2006

Principal Investigator: Dr. Suzanne Hering, President

ICAT Funding: $80,000

Co-funding : $80,000

Past Experience with This Principal Investigator:

Prior ICAT Funding to 2005

Year	2004	2003	2002
Funding	0	0	0

B U D G E T S U M M A R Y

Aerosol dynamics, Inc.

"A Low-Cost Ultra-fine Particle Concentration Monitor"

Direct Costs and Benefits	**ICAT**	**Total**
1. Labor	$ 31,600	$ 60,030
2. Employee Fringe Benefits	$ 15,320	$ 21,490
3. Subcontractors	$ 0	$ 0
4. Equipment	$ 0	$ 12,000
5. Travel and Subsistence	$ 71	$ 3,166
6. Materials and Supplies	$ 131	$ 5,375
7. Other Direct Costs	$ 0	$ 0
Total	$ 47,142	$102,511
Indirect Costs		
1. Overhead	$ 32,858	$ 57,489
2. Other Indirect Costs	$ 0	$ 0
Total	$ 32,858	$ 57,489
Total Project Costs	**$ 80,000**	**$160,000**