

Nanoscale Science and Engineering for Agriculture and Food Systems

Goals / Priorities

- Nanoscale recognition, reception, and transmission mechanisms and novel materials for developing nano-based sensors specifically for targets important to food safety and agriculture biosecurity.
- Novel nanoscale processes, materials, and systems with improved delivery efficacy, controlled release, modification of sensory attributes, and protection of micronutrients and functional ingredients suitable for food matrices.
- Understanding nanoscale phenomena and processes to support the development of nano-based technologies for food and agricultural product quality monitoring, identity tracking, and preservation.
- NEW: Assessment and analysis of perceptions and acceptance of nanotechnology and nano-based products by the general public, agriculture, and food stakeholders using appropriate social science tools.

NRI 75.0 Funding Statistics

FY	2004	2005	2006*	2008**
Submission	74	66	65	70
Funded	8	7	12	19
Suc. Rate	11%	11%	18%	27%
Total (\$M)	1.432	2.873	2.500	5.000
Young Sci	5(asst.prof)	2	5	8
LGUs	7	7	8	19
Others	1	0	4	0

*The revised RFA based on the logic model for ten year program planning.

**Combined two year funding for a singly solicitation.

Tips for Success – Nanoscale Science and Engineering for Agriculture and Food Systems

- What is nano?
 - Be sure that your proposed study follows the definition of the NNI.
- Does your proposed study address the priorities specified in the program RFA?
- Exploratory research is open to every one.
- What is considered a multidisciplinary project?
- When in doubt, contact the NPL.



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Improving Food Quality and Value

Past Priorities - Research

- Mechanisms of interaction of molecular food components affecting quality
 - Engineering principles of innovative processing technologies
 - Effect of processing on the bioavailability of health components in foods
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Improving Food Quality and Value

Past Priorities - **Integrated**

- Engineering principles of innovative processing technologies
 - Functional foods to promote energy balance, with an emphasis on efficacy and safety (Joint priority with Bioactive Food Components)
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Improving Food Quality and Value Funding Statistics, 2006-2008

	Research	Integrated
• # Submitted	308	35
• # awarded	66	8
• % success	21	23
• Average award size**	\$336 K	\$380 K
• Duration (years)**	2-3	3-4

**Excludes Seed, Equipment, Bridge, and Conference grants and Postdoctoral Fellowships

Tips for Success – Improving Food Quality and Value

A letter of intent is required for this program!

- Follow formatting rules and deadlines just as you would for full proposals
- Justify relevance to program – list the program priority(ies) your project addresses
- Demonstrate that the proposal is driven by hypothesis/cutting edge science, novelty, and significance
- Include information about approach to be used and brief description of preliminary data when possible
- For resubmissions do NOT just send last year's abstract!!!

Tips for Success – Improving Food Quality and Value

- Proposals solely based on data collection are not competitive
- Proposals improving food quality via preharvest interventions are not eligible
- For proposals overlapping between food science and nutrition, contact the NPLs
- Proposals with food safety focus should be submitted to food safety programs; for those with quality and safety focus contact the NPL
- **Proposals involving nanotechnology – Contact Drs. Hongda Chen and Ram Rao to determine the best fit of programs**