Substances Nominated to the NTP for Toxicological Studies and Testing Recommendations Made by the NTP Interagency Committee for Chemical Evaluation and Coordination (ICCEC) on June 10, 2003

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Substance [CAS No.]	Nominated by	Nominated for	Rationale for Nomination	ICCEC Recommendations	P Con Re
Acrylamide [79-06-1] and Glycidamide [5694-00-8]	U.S Food and Drug Administration	-Toxicological characterization including toxicokinetic, mechanistic, and carcinogenicity studies	Inadequate information available to accurately assess human health risks from exposure to acrylamide in foodstuffs; a properly designed well-conducted, GLP-compliant bioassay with appropriate ancillary studies is needed to provide dose response information and account for the food matrix through which humans are exposed	Toxicological studies: -Toxicological characterization -Toxicokinetics -Mechanistic (hemoglobin adducts) -Carcinogenicity -Bioavailability from food and drinking water	yes
Antimony trisulfide [1345-04-6]	National Cancer Institute	-Chronic toxicity/ carcinogenicity	Significant human exposure in occupational settings and suspicion of carcinogenicity	Toxicological studies: -Chronic toxicity/ carcinogenicity	yes
Cadmium telluride [1306-25-8]	U.S. Department of Energy Brookhaven National Laboratory	-Long-term oral and inhalation toxicity studies -Chemical disposition, metabolism, and	Potential for widespread applications in photovoltaic energy generation; anticipated increase in	Toxicological studies: -Toxicological characterization -Chemical disposition (oral and	yes

	National Renewable Energy Laboratory First Solar, Inc.	pharmacokinetic studies	human exposures; further data needed to address health and safety issues related to manufacture and use	inhalation)	
Cedarwood oil, Virginia [8000-27-9]	National Cancer Institute	-Subchronic toxicity	Widespread occupational and consumer exposure; lack of basic toxicology data	Toxicological studies: -Toxicological characterization -Developmental toxicity	yes
Chondroitin sulfate [9007-28-7] [9082-07-9] (sodium salt)	National Cancer Institute	-Chronic toxicity/ carcinogenicity alone and in combination with glucosamine	Widespread long-term use as a dietary supplement and inadequate data to assess safety	Toxicological studies: -Chronic toxicity/ carcinogenicity -Carcinogenicity of chondroitin sulfate and glucosamine combined	yes
Dimethylethanolamine [108-01-0]	National Institute of Environmental Health Sciences	-Toxicological characterization including toxicokinetic, reproductive and developmental toxicity, mechanistic, and carcinogenicity studies	Potential for widespread human exposure to DMAE through its use in industrial and consumer products; inadequate toxicological database; some ethanolamines can interfere with choline uptake and utilization and may also generate nitrosamines	Toxicological studies: -Metabolism	yes
Drugs positive for QT Interval Prolongation/Induction of *Torsade* Proarrhythmia [No CAS No.]	U.S Food and Drug Administration	-Non-clinical safety pharmacology studies of both problematic and non-problematic drugs in the conscious canine telemetry model to better establish the sensitivity and specificity of this *in vivo* model system for evaluating the property of a test agent to prolong QT interval at relevant exposures in humans	QT interval prolongation and *torsade de pointes* is a high priority cause for concern in drug development and regulatory safety evaluation; a clear definition of the strengths, limitations, and future performance characteristics of the canine telemetry model for pre-clinical safety assessment is needed	Initiate a study program to develop *in vitro* and *in vivo* test systems for assessing QT interval prolongation	yes
Glucosamine [3416-24-8]	National Cancer Institute	-Chronic toxicity/ carcinogenicity alone and in combination with chondroitin sulfate	Widespread long-term use as a dietary supplement and inadequate data to assess safety	Toxicological studies: -Chronic toxicity/ carcinogenicity -Carcinogenicity of chondroitin sulfate and glucosamine combined	yes

Nanoscale materials [No CAS No.]	Rice University Center for Biological and Environmental Nanotechnology	-Toxicological characterization of several representative classes of nanomaterials	Intense current and anticipated future research and development focus; further studies and development of appropriate toxicological methods are needed to adequately assess health effects	Toxicological studies: -Size- and composition-dependent biological disposition of nanocrystalline fluorescent semiconductor materials -Toxicological characterization of high aspect ratio carbon nanomaterials -Role of particle core and surface composition in the immunotoxicity of the above listed materials -Phototoxicity of representative metal oxide nanoparticles	yes
4-Phenylcyclohexene [4994-16-5]	Private Individuals	-Toxicological characterization including genotoxicity and neurotoxicity	Present in indoor environments primarily from carpet emissions; concern that it has not been adequately tested for potential health effects	No toxicological studies at this time due to low suspicion of hazard based on available human exposure and toxicity information	yes
trans-Resveratrol [501-36-0]	National Institute of Environmental Health Sciences	-Toxicological characterization	Widespread human exposure from natural dietary sources and use of dietary supplements; suspicion of toxicity based on estrogenic and genotoxic activity; insufficient data available to characterize safety	Toxicological studies: -Toxicological characterization -Carcinogenicity -Reproductive toxicity	yes
Tetrabromobisphenol A [79-94-7]	National Institute of Environmental Health Sciences	-Toxicological characterization including neurodevelopmental toxicity and carcinogencity studies	High production volume, widespread human exposure and suspicion of thyroid toxicity/tumorigenicity	Toxicological studies: -Toxicological characterization -Neurodevelopmental toxicity -Carcinogencity	yes
Tetrabromobisphenol A bis(2,3-dibromopropyl ether) [21850-44-2]	National Institute of Environmental Health Sciences	-Toxicological characterization -*In vivo* genotoxicity	High production volume; little toxicity data available; suspicion of carcinogenic potential due to 2,3-dibromo-1-propanol substructure	Toxicological studies: -Toxicological characterization -*In vivo* genotoxicity -Metabolism -Carcinogencity	yes

Tungsten [7440-33-7]	National Center for Environmental Health	-Toxicological characterization including carcinogenicity	Important industrial materials; insufficient data to assess human health implications of elevated urinary tungsten levels	Toxicological studies: -Toxicological characterization -Carcinogenicity Studies should focus on a representative soluble tungsten compound	yes

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