

## Grant Coding Database Attributes

LOOKUP_NAME	LOOKUP_VALUE	
<b>SECTION 1 -----&gt;</b>	<b>Approach, Exposures, and Outcomes</b>	
Focus	Focus	
	Environmental Matrix (Non-Biomedical Focus)	
	Human Health (Biomedical Focus)	
Science Type	Science Type	
	Data Science	
	Human Health (Biomedical)	
	--Basic in vitro (e.g. cell culture; biochemistry)	
	--Basic in vivo (model organisms)	
	--Epidemiological / Clinical	
	--Statistical Approaches	
	Environmental Matrix (Non-Biomedical)	
	--Modeling (e.g. Pollutant Modeling)	
	--Laboratory / Bench scale	
	--In situ (field studies)	
	Social Sciences	
	Education/ Training	
	Environmental Exposure Agent	Environmental Exposure Agent
		EA: Other
EA: Not Relevant		
EA: Relevant but Not Specified		
Air Pollutants		
--Acrolein		
--CO / CO2		
--E-cigarettes		
--NO / NO2		
--Ozone		
--PAHs (Air) incl BaP		
--Particulates (incl diesel)		
--Sulfur oxides		
--Tobacco smoke		
--Traffic pollutants		
--VOCs		
Allergens		
--Cockroach allergen		
--Dust mite allergen		
--Food-based		
--Mold		
--Pollen		
Asbestos		
Brominated Compounds		
--MTBE		
--PBDEs		
Chemical Weapons		
Chlorinated Compounds		
--Carbon tetrachloride		
--Dioxins		
--Furans		
--Hexachlorobenzene		
--MPTP		
--PCBs		

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--PCE
--PCNs
--Perchlorates
--TCE
--Triclosan
Chlorine Gas
DNA Damaging Agent
--Alkylating agents
--Methylating agents
--Mutagens
Disinfection By-Products
ENM
--Carbon nanotubes
--Nanometals
--Silica
Extreme Weather / Climate Change
Flame Retardants
Fluorinated Compounds
--PFCs
--PFOA
--PFOS
Herbicides / Fungicides
--2,4-D
--Atrazine
--Glyphosate (RoundUp)
--Maneb / Mancozeb
--Paraquat
--Vinclozolin
Hormonal Mimics / Hormones
--Androgen
--BADGE
--BPA
--DES
--Dexamethasone
--Estradiol / Estrogen
--Genistein / Phytoestrogens
--Nonylphenol
--Other EDCs
--Phthalates
--Steroids
Infectious Agents
--Aflatoxin
--Bacteria
--LPS / Endotoxin
--Other bacterial toxins
--Red tide, domoic acid
--Virus
Iodated Compounds
--Methyl Iodide
Ionizing Radiation
--Radioactive substances
--Radon

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**LOOKUP\_NAME**

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--Uranium
Metals
--Arsenic
--Cadmium
--Chromium
--Cobalt
--Copper
--Lead
--Manganese
--Mercury
--Nickel
--Zinc
Multi-Agent: Mixtures
Multi-Agent: POPs
NAPLs
--DNAPLs
--LNAPLs
Non-Ionizing Radiation
--UV
--UVA
--UVB
Nonspecific Nano
Nutrition / Diet
--High fat diet
--PUFAs
Organotins
--Tributyltin
--Triphenyltin
Other Hydrocarbons
--PAHs (all media) incl BaP
Other Organic Compounds
--Acetone
--BPDE
--Benzene / Ethylbenzene
--Formaldehyde
--Nitro Compounds / Nitrosamines
--Phenol
--Toluene/Xylene
--n-Hexane
Pesticides
--Carbamates
--Chlorinated pesticides
--Organophosphates (incl dichlorvos)
--Other pesticides
--Pyrethroids
--Rotenoids (Rotenone)
Pharmaceuticals
--Anti-inflammatories / NSAIDS
--Anti-oxidants
--Chemotherapeutics
--Glucocorticoids
--Immunosuppressants

## Grant Coding Database Attributes

**LOOKUP\_NAME**

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	Physical Activity Level
	Physical, Non-Chemical Stress
	--Hypoxia
	--Oxidative stress
	--Reactive nitrogen species
	Psychosocial Stress
	Supplements
	--Fish oil
	--Resveratrol
	--Selenium
	--Vitamin E
	Tox21 Panel
Health Outcome	Relevant Health Outcome/Disease Endpoint
	HO: Other
	HO: Not Relevant
	HO: Relevant but Not Specified
	Birth Outcomes
	--Birth defects
	--Birthweight
	--Gestational age
	--Head circumference
	Cancer Outcomes
	--Bone cancer
	--Brain cancer
	--Breast cancers
	--Childhood cancer
	--Colon cancer
	--Kidney cancer
	--Leukemia/Lymphoma
	--Liver cancer
	--Lung cancer
	--Ovarian cancer
	--Pancreatic cancer
	--Prostate cancer
	--Skin cancer
	--Testicular cancer
	Cardiovascular Outcomes
	--Atherosclerosis
	--Blood disease
	--Cardiovascular disease
	--Cardiovascular malformations
	--Coronary artery disease
	--Hypertension
	--Stroke
	Gastrointestinal Outcomes
	--Diarrhea
	--Irritable bowel syndrome
	Immune Outcomes
	--Allergic response
	--Autoimmune
	--Immune response to infection
	--Immunosuppression

## Grant Coding Database Attributes

**LOOKUP\_NAME**

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--Immunotoxicity
--Infectious disease / infection
--Other immune condition
--Vaccine response
<a href="#">Kidney Outcomes</a>
--Chronic kidney disease
--Renal toxicity
<a href="#">Liver Outcomes</a>
<a href="#">Mechanistic Studies</a>
--AhR signaling
--Carcinogenesis
--Cytochrome P450
--DNA damage/ repair / replication
--Endocrine
--Epigenetics
--Inflammation
--Mitochondrial dysfunction
--Oxidative stress
<a href="#">Metabolic Outcomes</a>
--Diabetes
--Metabolic syndrome
--Nutrient deficiency
--Obesity / aberrant body weight
<a href="#">Microbiome Outcomes</a>
<a href="#">Morbidity / Mortality</a>
<a href="#">Musculoskeletal Outcomes</a>
--Bone disease (non-cancer)
--Muscle disorders
--Neuromuscular / Motor function
--Osteoporosis
<a href="#">Neurological / Cognitive Outcomes</a>
--ADHD
--ALS
--Alzheimer's
--Autism spectrum disorder
--Autonomic nervous system functions
--Dementia
--Huntington's disease
--Mental health / psychiatric disorders
--Neurobehavioral outcomes
--Neurodegeneration outcomes
--Neurodevelopmental outcomes
--Neuroinflammation
--Neurotoxicity
--Parkinson's
--Seizures
<a href="#">Reproductive Outcomes</a>
--Endometriosis
--Fertility
--Fibroids
--Polycystic ovarian syndrome
--Premature / delayed menopause

## Grant Coding Database Attributes

LOOKUP\_NAME

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--Premature / delayed puberty
--Sexuality
<b>Respiratory Outcomes</b>
--Acute lung injury/illness
--Airway inflammation / Hyperresponsiveness
--Asthma
--Chronic obstructive pulmonary disease (COPD)
--Decreased lung capacity
--Lung Fibrosis / Emphysema
--Lung inflammation
--Other respiratory condition
--Pulmonary edema
<b>Skin Outcomes</b>
--Contact dermatitis
--Eczema
--Lesions
--Pigmentation outcomes
--Psoriasis
--Xeroderma pigmentosum
<b>Thyroid Dysfunction</b>
<b>Toxicity/Toxicology</b>

**SECTION 2 ----->**

**Research Subject Information**

<b>Organism</b>	<b>Organism</b>
	OG: Other
	OG: Relevant, but not specified
	OG: Not Relevant
	<b>Amphibian</b>
	--African clawed frog: Xenopus laevis
	<b>Bird</b>
	--Chicken: Gallus gallus
	<b>Crustacean</b>
	--Daphnia: Daphnia pulex
	<b>Fish</b>
	--Killifish
	--Zebrafish: Danio rerio
	<b>Genetically Modified Organism</b>
	--Genetically modified cells / cell lines
	--Knockout (write in genes)
	--Other genetic modifications
	--Transgenic (write in genes)
	<b>Human (Whole Organism)</b>
	<b>Human Cells</b>
	--Human established cell lines
	--Human primary cells
	--Human stem cells (includes ES cells)
	<b>Invertebrate</b>
	--Fly: Drosophila melanogaster
	--Fly: Drosophila pseudoobscura
	--Worm: Caenorhabditis elegans
	<b>Non-Human Cells</b>
	--Non-human established cell lines
	--Non-human primary cells

## Grant Coding Database Attributes

**LOOKUP\_NAME**

**LOOKUP\_VALUE**

	--Non-319:320human stem cells (ES cells)
	Other mammal
	--Monkey / rhesus monkey / macaque
	--Pig
	--Rabbit
	--Sheep
	Population-based models/models of genetic diversity
	--Collaborative Cross (CC)
	--Diversity Outbred (DO)
	--Drosophila Genetics Reference Panel (DGRP)
	--Hybrid Mouse Diversity Panel (HMDP)
	--Other
	--Rat Hybrid Diversity Panel (RHDP)
	Prokaryote
	--Bacteria: Escherichia coli
	Rodent
	--Golden Hamster: Mesocricetus auratus
	--Guinea Pig: Cavia porcellus
	--Mouse: Mus musculus
	--Rat: Rattus norvegicus
	Unicellular Eukaryote
	--Yeast: Saccharomyces cerevisiae
	--Yeast: Schizosaccharomyces pombe
Gender	Gender
	GN: Other
	GN: Not Relevant
	Male
	Female
	Ambiguous / Hermaphrodite
Secondary Subject	Secondary Subject
	SS: Other
	SS: Not Relevant
	Mother
	Father
	Twin - Identical
	Twin - Fraternal
	Sibling
Lifestage Exposure	Lifestage at Exposure
	LE: Other
	LE: Not Relevant
	LE: Relevant but Not Specified
	Prenatal / Pre-Conception Exposure
	--Pre-conception exposure
	--Prenatal exposure
	Infant (0-1 year) Exposure
	--Neonatal (0-4 weeks) exposure
	--Newborn (1-3 months) exposure
	--Infancy (4-12 months) exposure
	Youth (1-18 years) Exposure
	--Toddler (>1-3 years) exposure
	--Childhood (4-12 years) exposure
	--Adolescence (12-18 years) exposure

## Grant Coding Database Attributes

### LOOKUP\_NAME

### LOOKUP\_VALUE

	Adulthood (18 years +) Exposure
	--Adult age 18-44 years
	--Middle aged adult 45-64 years
	--Older adult 65+ years
	Adulthood (Father)
	Adulthood (Mother)
	Non-human Exposure
	--Neonate
	--Juvenile
	--Adult
	--Prenatal
Lifestage Assessment	Lifestage at Assessment
	LA: Other
	LA: Not Relevant
	LA: Relevant but Not Specified
	Prenatal / Pre-Conception Assessment
	--Pre-conception assessment
	--Prenatal assessment
	Infant (0-1 year) Assessment
	--Infancy (4-12 months) assessment
	--Neonatal (0-4 weeks) assessment
	--Newborn (1-3 months) assessment
	Youth (1-18 years) Assessment
	--Adolescence (12-18 years) assessment
	--Childhood (4-12 years) assessment
	--Toddler (>1-3 years) assessment
	Adulthood (18 years +) Assessment
	--Adult Age 18-44 years
	--Middle Aged Adult 45-64 yr
	--Older Adult 65+ yrs
	Adulthood (Father)
	Adulthood (Mother)
	Transgenerational Assessment
	Non-human Assessment
	--Adult Non-human
	--Juvenile Non-human
	--Neonate Non-human
	--Prenatal Non-human
Biological Route	Biological Route (Passive or Applied)
	BR: Other
	BR: Not Relevant
	BR: Relevant but Not Specified
	Dermal/Implant
	Full Body Exposure
	Immersion
	Ingestion / Gavage
	Inhalation
	--Intranasal
	Injection
	--Intracranial
	--Intradermal
	--Intramuscular



## Grant Coding Database Attributes

### LOOKUP\_NAME

### LOOKUP\_VALUE

	--Intraperitoneal
	--Intratracheal
	--Intravenous
	--Subcutaneous
	Ocular
Biological Sample	Biological Sample Collected/Tested
	BS: Other
	BS: Not Relevant
	BS: Relevant but Not Specified
	Amniotic Fluid
	Blood
	Breast Milk
	Collected Cells
	--*From established cell line
	--*From primary cells
	Cord Blood
	Fingernails / Toenails
	Hair
	Maternal Biosample
	--*Blood
	--*Hair
	--*Other
	--*Plasma
	--*Saliva/buccal Cells
	--*Serum
	--*Subject-derived Cells/Tissues/Organs
	--*Urine
	Paternal Biosample
	--*Blood
	--*Hair
	--*Other
	--*Plasma
	--*Saliva/buccal Cells
	--*Serum
	--*Subject-derived Cells/Tissues/Organs
	--*Urine
	Placenta
	Plasma
	Saliva / Buccal Cells
	Semen
	Serum
	Subject-Derived Cells / Tissues / Organs
	--*Brain
	--*Fetal tissue
	--*Liver
	--*Lung / airway
	Subject-Derived IPS Cells
	Urine
Other Sample	Other Types of Collected Information and Measurements
	CI: Other
	CI: Not Relevant
	CI: Relevant but Not Specified

## Grant Coding Database Attributes

**LOOKUP\_NAME**

**LOOKUP\_VALUE**

	Behavioral / Cognitive Tests
	Diary (e.g., Food; Activities)
	General Diagnostics / Medical Exam (e.g., Weight; Blood Pressure)
	Questionnaire / Survey / Interview
	Specific Diagnostics / Physiological Function (e.g., Lung; Heart)
<b>SECTION 3 -----&gt;</b>	<b>Epidemiological or Environmental Information</b>
Exposure Source	Source of Environmental Exposure
	EE: Other (write in)
	EE: Not Relevant
	EE: Relevant but Not Specified
	Abatement / Clean Up
	--Asbestos abatement
	--Lead abatement
	--Mold clean up
	--Nuclear power plant clean up / shut down
	Agricultural
	--Fertilizer
	--Herbicide
	--Pesticide / insecticide
	Geological Resource Recovery
	--Drilling
	--Hydraulic fracturing
	--Mining
	Household
	--Basic materials
	--Cooking fuel
	--Cookstoves
	--Flame retardants in furniture (also check Furniture)
	--Furniture/Appliances
	--Heating fuel
	--Household cleaning products
	--Household electronics
	--Household pesticide
	--Plumbing materials
	--Refrigerant
	Industrial
	--Chemical / pharmaceutical manufacturing
	--Electronics manufacturing
	--General manufacturing
	--Metallurgy
	Marine
	--Fish farming
	--Marine drilling
	--Shipping
	Medical
	--Drugs and drug by-products
	--Medical waste
	Methamphetamine Production
	Military
	--General operations
	--Weapons manufacture / testing / storage
	Municipal

## Grant Coding Database Attributes

### LOOKUP\_NAME

### LOOKUP\_VALUE

	--Power plants
	--Waste disposal
	--Water treatment
	Naturally Occurring
	--Bedrock
	--Biological organisms
	--Sunlight
	Occupational (write in occupation; also check other sources)
	Oil / Fuel Spill
	--Leaking underground storage tank (LUST)
	--Oil tankers
	--Pipelines
	Personal
	--Clothing and jewelry
	--Cookware
	--Diet/Food additives
	--Flame retardants in clothing (also check Clothing)
	--Food containers, packaging, and storage
	--Personal care products
	--Personal electronics
	--Tobacco products
	Traffic (Air Pollution)
Exposure Carrier	Primary Contamination Carrier of Environmental Exposure
	PC: Other (write in)
	PC: Not Relevant
	PC: Relevant but Not Specified
	Air
	--Indoor
	--Outdoor
	Dust
	Food
	Sediment
	Soil
	Water (Drinking)
	--Drinking water reservoir
	--Municipally provided water / public well
	--Private well
	Water (Non-Drinking)
	--Groundwater
	--Lake/Pond
	--Ocean
	--Other body of water (e.g., drainage pond)
	--Pore water
	--River
Environmental Sample	Environmental Sample Collected/Tested
	ES: Other
	ES: Not Relevant
	ES: Relevant but Not Specified
	Air Sample
	--Indoor sample
	--Outdoor sample
	Dust Sample

## Grant Coding Database Attributes

**LOOKUP\_NAME**

**LOOKUP\_VALUE**

Food Sample
Sediment Sample
Soil Sample
Water (Drinking) Sample
--Drinking water reservoir sample
--Municipally provided / public water
--Private well sample
Water (Non-Drinking) Sample
--Groundwater
--Lake / Pond sample
--Ocean sample
--Other body of water sample
--Pore water sample
--River sample

**SECTION 4 ----->**

**Environmental Approach**

Environmental Approach	Environmental Approach
	EN: Other
	EN: Not Relevant
	EN: Relevant, but Not Specified
	Chemical Analysis
	--Analytical chemistry
	--Biochemistry
	--Electrochemical processes
	--Non-targeted chemical analysis
	--Targeted chemical analysis
	Ecology
	--Bioaccumulation
	--Ecosystem toxicity
	--Ecosystem-level indicators
	Engineering
	--Bioengineering
	--Biosensor device
	--Chemosensor device
	--Environmental monitoring device
	--Filtration device
	--Materials science
	--Personal monitoring device
	--Remediation device
	--Remote sensor device
	--Sampling device
	Fate / Transport / Monitoring
	--Atmospheric modeling
	--Citizen Science / community-based monitoring
	--Pollutant modeling
	--Pollutant tracking / monitoring
	--Spatio-temporal analysis
	Geosciences
	--Bio-geochemical interactions
	--Geochemistry
	--Geology
	--Hydrogeology
	Mechanistic Environmental Approaches

## Grant Coding Database Attributes

### LOOKUP\_NAME

### LOOKUP\_VALUE

--Biological mechanisms
--Pollutant degradation / transformation
--Role of organisms studied
<b>Remediation Approaches</b>
--Bioremediation
--Capping / containment
--Chemical remediation
--Electrochemical remediation
--Nano-enabled remediation
--Physical remediation
--Phytoremediation / phytostabilization
--Solar / green technology
--Sorbents
--Thermal remediation

### SECTION 5 ----->

### Study Specifics

<b>Bioavailability</b>	<b>For Studies that Focus on Bioavailability</b>
	BV: Other
	BV: Not Relevant
	BV: Relevant but Not Specified
	Environmental Bioavailability
	Media / Receptor Interface
	Within Receptor
<b>Dose</b>	<b>For Studies that Focus on Dose</b>
	RD: Other
	RD: Not Relevant
	RD: Relevant but Not Specified
	Altered Dose Response Based on Window of Exposure
	Below-Threshold Dose
	Dose Response
	Low-Dose
	Physiologically or Environmentally Relevant Dose
<b>Experimental Approach</b>	<b>Experimental Approach: Key Mechanism, Assays, Technologies, and infrastructure</b>
	EX: Other
	EX: Not Relevant
	EX: Relevant, but Not Specified
	*Biological Sample Collected
	Analysis of gene expression (transcripts / regulatory RNA)
	Analysis of gene structure (sequence / adducts / mods)
	Biochemistry techniques
	-- Mass Spectrometry
	-- Protein binding / activity
	Biomarkers /Biomonitoring
	--Biol response biomarker
	--Biomarker of effect
	--Biomarker of exposure
	--Biomarker of susceptibility
	--Candidate biomarker
	--Chem metabolite biomarker
	--Identify new biomarker
	--Known biomarker
	--Primary chemical biomarker

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**LOOKUP\_NAME**

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--Validate biomarker
Cell-based assays
Cellular Processes Analysis
Chemical Analysis (fate / transport / remediation)
Data Science
--Analysis /modeling methodologies
--Data Integration
--Data algorithm development
--Data mining
--Data repository development/management
--Data/metadata standards development
--Machine learning
--Other
--Tool development
--Vocabulary/ontology development
Environmental sampling / detection
-- Biosensors
-- Nano-enhanced sensors
-- Other sensors
-- Remote sensors
-- Sampling technology
Geographic information (GIS, GPS)
Global / bioinformatic approaches
-- Epigenomics
-- Genomics
-- Metabolomics
-- Microarrays / global gene expression
-- Microbiomics
-- Proteomics
Green Chemistry
High-throughput screening / robotics
Imaging / microscopy
Immunoassays
In silico
Metal Speciation
Monitoring Devices (biomonitoring)
Monitoring devices (environment)
Monitoring devices (personal)
Nano Tools
New methods
Population Study
-- Case-Control
-- Longitudinal
-- New cohort
-- New data from previous cohort; new subcohort
-- Randomized Control Trial
-- Uses existing cohort; no new data collected
Prevention/Intervention
Remediation Technologies
Risk assessment
Signaling pathways
-- AHR signaling

## Grant Coding Database Attributes

**LOOKUP\_NAME**

**LOOKUP\_VALUE**

	-- Cytochrome P450
	-- Endocrine disruption
	-- Other signal transduction pathways
	-- Reactive oxidative species / oxidative stress
	Statistical and analytical approaches
	Structural Analysis
	-- Computational modeling
	-- Cryo EM
	-- NMR
	-- X-ray diffraction
	Systems Biology
	Windows of Susceptibility
<b>Cohort</b>	<b>Cohort</b>
	Other
	Not Relevant
	Relevant but Not Specified
	A Study to Understand the Mechanisms of Asthma Dietary Interventions to Protect Against Environmental Triggers (Asthma-DIET)
	ALS and the Microbiome
	Adult Lung Health Study (ALHS)
	Agricultural Health Study (AHS)/Farming and Movement Evaluation (FAME) study
	Air Pollution Biomarkers and CVD in Los Angeles and Beijing
	Air Pollution and COPD Patients in Boston
	Air Pollution and Childhood Cancers (APCC) registry study
	Air Pollution and Hypertension
	Air pollution and tuberculosis in Vietnam
	Airborne Exposures to Persistent Organic Pollutants (AESOP)
	Alberta Pregnancy Outcomes and Nutrition (APrON)
	Allergic Airway Intervention
	Arsenic Exposure and Mortality: Northern Chile
	Arsenic Health Risk Assessment and Molecular Epidemiology (ASHRAM)
	Arsenic and Neural Tube Defects in Bangladesh
	Autism Regression
	BCERP: Cohort Study of Young Girls' Nutrition, Environment, and Transitions (CYGNET)
	BCERP: Growing Up Female
	BCERP: Growing Up Healthy
	BPA Exposure and Risk of Gestational Diabetes
	Baltimore Mobility Program Study
	Bangladesh Vitamin E and Selenium Trial (BEST)
	Bedford VA Alzheimer's case control
	Beijing Olympics 2008 Cohort
	Beijing Truck Driver Air Pollution Study
	Biomarkers of Exposure to Arsenic (BEAR)
	Black Women's Health Study (BWHS)
	Bogalusa Heart Study (BHS)
	CERCH: Seveso Women's Health Study (SWHS)
	COPD and Domestic Endotoxin (CODE)
	California Prenatal Screening Program (previously known as the "Expanded Alpha-fetoprotein (AFP) Program")
	California Teacher's Study (CTS)
	California Twin Sun Case Study
	Cancer Screening Program (CSP) cohort

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**LOOKUP\_NAME**

**LOOKUP\_VALUE**

Center for Research on Early Childhood Exposure and Development in Puerto Rico (CRECE)
Center for the Health Assessment of Mothers and Children of Salinas (CHAMACOS)
Chicago Health and Aging Project
Childhood Autism Risks from Genetics and Environment (CHARGE)
Children with in utero Arsenic Exposure: Bangladesh
Children's Health and Air Pollution Study in the San Joaquin Valley (CHAPS-SJV)
Chronic Beryllium Disease (CBD) cohort
Chronic Kidney Disease in Children (CKiD)
Cincinnati Childhood Allergy and Air Pollution Study (CCAAPS)
Cincinnati Lead Study (CLS)
Coal Ash and Child Neurobehavior in Kentucky
Cohort of Benzene-Exposed Workers
Columbia Center for Children's Environmental Health: Mothers and Newborns in China
Columbia Center for Children's Environmental Health: Mothers and Newborns in Poland
Controlled Air Pollution Exposure Study
Cooking and Pneumonia Study (CAPS)
DNA Repair in Head and Neck Cancer
DWH: Women and Their Children's Health (WaTCH)
Danish Medical Birth Registry
Danish National Birth Cohort (DNBC)
Deep Water Horizon: Gulf Resilience on Women's Health
Deep Water Horizon: The Gulf Long-term Follow-up Study
Diabetes Prevention Program Outcomes Study (DPPPOS)
Disease Investigation Through Specialized Clinically-Oriented Ventures in Environmental Research (DISCOVER) - Baltimore
ELEMENT
Early Autism Risk Longitudinal Investigation (EARLI)
Early Markers for Autism (EMA) Study
Egyptian Agricultural Workers
Environment and Reproductive Health (EARTH) Study
Environment, genetics and epigenetics in a R.I. Birth Cohort
Environmental Control Therapy for Children with Asthma
Epigenetics, Traffic Related Air Pollution, and Neonatal Health in Southern California
Faroe Islands Cohort: Adults Prenatally Exposed to Diabetic Pollutants
Faroe Islands Cohort: Immunotoxicants in Children
Faroe Islands Cohort: Immunotoxicity with Lifetime Exposure to PFCs
Fluorosis in the Main Ethiopian Rift Valley
Folic Acid and Creatine Trial
Folic Acid and Creatine Trial
Fresno Asthmatic Children's Environmental Study (FACES)
GEStation Thyroid and Environment
Gene-Environment Interaction in Prostate Cancer (GECAP)
Gene-environments and Admixture in Latino Asthmatics (GALA 2)
Generation R
Genetics of Asthma in Latino Americans (GALA I)
Ghana Cookstove Study
Great Lakes Fish Consumption and PCB Exposure
Growth and Obesity Cohort Study (GOCS)
Gulf Coast Health Alliance: Health Risks related to the Macondo Spill (GC-HARMS)
Gutenberg Health Study (GHS)
Harvard Cooperative Program on Aging
Harvard Epigenetic Birth Cohort (HEBC)



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**LOOKUP\_NAME**

**LOOKUP\_VALUE**

Health Effects of Arsenic Longitudinal Study (HEALS)
Health Outcomes and Measures of the Environment (HOME) Study
Health Professionals Follow-up Study (HPFS)
Healthy Start Birth Cohort
Home Observation of Periconceptional Exposures (HOPE) Study
Home-Based Asthma Support and Education for Adults (HomeBase)
Honduran Families Using Cookstoves
Hospital-Based Phthalate Exposure in Very Low Birth Weight Infants (HBPE)
Hydraulic Fracturing and Quality of Life
Illinois Kids Development Study
Infantes y Salud Ambiental (or Infants' Environmental Health Study)
International Study of Asthma and Allergies in Childhood (ISAAC)
LA Family and Neighborhood Survey
LifeCodes
Long Island Breast Cancer Study Projects (LIBCSP)
Long Island WTC Responders cohort
Manganese and Neurological Outcomes in South Africa
Marietta Community Actively Researching Exposure Study (CARES)
Markers of Autism Risk in Babies-Learning Early Signs (MARBLES)
Maternal Residential Proximity to Shale Gas Extraction and Pregnancy Outcomes
Maternal and Developmental Risks from Environmental and Social Stressors (MADRES) - Childhood Obesity Study
Memory and Aging Project (MAP)
Metal mixtures in Montevideo Children
Metropolitan Study of Chemicals and Pregnancy Health (The Parent Study)
Mexico City Air Pollution and Birth Outcomes
Mexico City Childhood Asthma Study (MCCAS)
Michigan PBB Cohort
Mother-Offspring Neurodevelopment Cohort in Wanshan, China
Mountain Air Project (MAP)
Multi-Ethnic Study of Atherosclerosis (MESA)
Mycotoxin Biomarkers and Childrens Health in Africa
NYC Air Pollution and Pregnancy Outcomes Cohort
National Birth Defects Prevention Study
National Farmworker Clinical Research Database
National Health and Nutrition Examination Surveys (NHANES) Continuous
National Health and Nutrition Examination Surveys (NHANES) Hispanic: 1982-1984
National Health and Nutrition Examination Surveys (NHANES) I: 1971-1974
National Health and Nutrition Examination Surveys (NHANES) II: 1976-1980
National Health and Nutrition Examination Surveys (NHANES) III: 1988-1994
Native American Wood Stove Study
Navajo Birth Cohort Study
Navajo Uranium Assessment and Kidney Health Project (NUAKHP)
New Bedford Cohort
New England Children's Amalgam Trial (NECAT)
New York City Mothers & Newborns Study
Newborn Epigenetics Study Cohort (NEST)
Northern California Childhood Leukemia Study (NCCLS)
Norwegian Mother and Child Cohort Study (MoBa)
Nurses' Health Studies (NHS) I
Nurses' Health Studies (NHS) II

## Grant Coding Database Attributes

**LOOKUP\_NAME**

**LOOKUP\_VALUE**

Nurses' Health Studies (NHS) III
Parkinson's Disease, Environment, and Genes (PEG)
Parkinsonism and Metal Exposures Among Welders
Parkinsonism in Welders
Particulate Reduction Education in City Homes (PREACH)
Pediatric Brain Imaging Project
Pediatric Imaging, Neurocognition, and Genetics (PING)
Peru Two Cities Asthma Study
Pesticide Exposure and Cerebral Palsy
Pesticide Exposure and Childhood Autism
Pesticide Exposure in Yakima Valley
Philadelphia Neurodevelopment Cohort (PNC)
Pregnancy Infection and Nutrition (PIN) cohort
Pregnancy to Early Life Longitudinal data system (PELL)
Prenatal Endocrine Disruption and Social Stress
Prenatal Environmental Determinants of InterGenerational Risk (PEDIGREE)
Prenatal Exposure to BPA/Phthalates: Infant Physical and Behavioral Development
Prenatal PCEs in New Bedford
Prenatal Exposures and the Fetal Brain (Detroit)
Preventing Overweight Using Novel Dietary Strategies (POUNDS LOST)
Programming Research in Environment and Social Stressors (PROGRESS)
Programming of Intergenerational Stress Mechanisms (PRISM)
Project VIVA cohort
Promoting Activity and Changes in Eating (PACE)
Public Health Impact of Mixed element Exposure in susceptible populations
Puerto Rico Testsite for Exploring Contamination Threats (PROTECT) Cohort
Reasons for Geographic and Racial Differences in Stroke Study (REGARDS)
Residents of Ambler, PA exposed to asbestos
Risk Factors for Antisocial Behavior (RFAB) Study
Russian Children's Study
Rwandan Cookstove Study
SPIROMICS - Air Pollution Study
Sacramento Area Latino Study on Aging Cohort
Sanitation Hygiene Infant Nutrition Efficacy (SHINE)
School Inner City Asthma Study (SICAS)
Seafood Choice in Asian Communities
Secondary Pesticide Exposure on Children and Adolescents
Seveso Women's Health Study Follow Up
Seychelles Child Development and Nutrition Study (SCDNS)
Shanghai Textile Worker Study (STWS)
Sister Study
Southern Center on Environmentally Driven Disparities in Birth Outcomes (SCEDDBO)
Sperm Environmental Epigenetics and Devevelopment Study (SEEDS)
Stockholm Youth Cohort (SYC)
Strong Heart Family Study (SHFS)
Strong Heart Water Study
Study of African Americans, Asthma, Genes and Environments (SAGE I)
Study of African Americans, Asthma, Genes and Environments (SAGE II)
Study of Environment Lifestyle and Fibroids
Study of Metals and Assisted Reproductive Technologies
Study of Traffic, Air Quality and Respiratory health (STAR)
Swedish Twin Study

## Grant Coding Database Attributes

### LOOKUP\_NAME

### LOOKUP\_VALUE

	The C8 (PFOA) Health Project: Neurobehavioral Development
	The C8 (PFOA) Health Project: Reproductive Health
	The C8 (PFOA) Health Project: Study of Exposure Response
	The Chihuahua Cohort
	The Child Health and Development Studies Cohort (CHDS)
	The Children's Health Study (CHS)
	The Infant Development and Environment Study (TIDES)
	The New Hampshire Birth Cohort Study
	The Normative Aging Study (NAS)
	The San Francisco Bay Area Lung Cancer Study
	The San Francisco Bay Area Lung Cancer Study
	The Treatment of Lead-Exposed Children (TLC) Trial
	US West Coast Childhood Brain Tumors (WCCBT) Study
	University of Washington Twin Registry
	Venda Health Examination of Mothers, Babies, and Their Environment
	Washington State Pesticide Handlers
	Wayne County Health, Environment, Allergy and Disease: Asthma Longitudinal Study (WHEALS)
	Woburn Childhood Leukemia Follow-Up Study
	Women's Health Initiative (WHI)
	Women's Health Study (WHS) Harvard
	Women's Risk of Endometriosis (WREN) study
	World Trade Center Pregnancy Cohort
<b>Cohort Focus</b>	<b>Cohort Focus</b>
	Cohort Details Provided
<b>Cohort Relationship</b>	<b>Cohort Relationship</b>
	GC: Not Relevant
	GC: Relevant But Not Specified
	New Cohort
	New Information
	New Analysis Only
	Data Only
<b>Broader Applications</b>	<b>Broader Applications of research</b>
	BA: Other
	BA: Not Relevant
	Anticipated Commercial Use
	Social / Behavioral
	Translational - Policy
	Translational - Therapeutics/Diagnostics
<b>Chromatin/Epigenetics</b>	<b>Chromatin/Epigenetics</b>
	CE: Other
	CE: Not Relevant
	CE: Relevant but Not Specified
	Chromatin Remodeling
	DNA Methylation
	Histone Marks
	--Acetylation [Archive]
	--Methylation [Archive]
	--Ubiquitination [Archive]
	RNA Regulation / Metabolism
	Transgenerational Modifications
<b>SECTION 6 -----&gt;</b>	<b>Training Activities</b>

## Grant Coding Database Attributes

LOOKUP_NAME	LOOKUP_VALUE	
Training Level	Training Level	
	TL: Other	
	TL: Not Relevant	
	TL: Relevant but Not Specified	
	High School	
	Undergraduate	
	Post-Baccalaureate	
	Masters	
	PhD (Pre-Doctoral)	
	Postdoctoral Trainees	
	Current Investigator	
	--Junior investigators	
	--Mid-career investigators	
	Medical Students	
	Dual Degree Student: MD / PhD or DVM / PhD	
	Practicing Medical Professionals	
	Occupational / Employees	
	Science Teachers	
	Target Populations	Target Populations
		TP: Other
TP: Not Relevant		
TP: Relevant but Not Specified		
Under-Represented Ethnic/Racial Group		
Low SES Groups		
Women		
Required by Grant		
Trainee Activities		Trainee Activities
		TA: Other
	TA: Not Relevant	
	TA: Relevant but Not Specified	
	Capacity Building	
	Continuing Education	
	Coursework	
	EHS Career Exploration	
	Formal Certification	
	Interdisciplinary/Cross-Disciplinary Training	
	International Training	
	Mentorship	
	Outside the Lab	
	--Community outreach	
	--Educational outreach	
	--Field experiences	
	--Field trips	
	--Patient-oriented activities	
	--Training exercises / simulations	
	Professional / Career Development	
	Projects / Presentations	
	Research / Lab Rotations	
	Responsible Conduct of Research / Ethics	
	Science Communication	
	Seminar / Journal Clubs	
	Teacher Training	

## Grant Coding Database Attributes

LOOKUP_NAME	LOOKUP_VALUE
	Train-the-Trainer
	Worker Training
Support Duration	Duration of Support
	SD: Other
	SD: Not Relevant
	SD: Relevant but Not Specified
	1-5 Months
	6 Months -12 Months
	1-3 Years
	4+ Years
<b>SECTION 7 -----&gt;</b>	<b>Administrative and Program Information</b>
Site Specific Study	Site-specific Study
	Within US
	Outside US
	Both Within and Outside US
	ST: Not Relevant
Knowledge Management	Knowledge Management
	KM: Not Relevant
	KM: Other
	Data Sharing
	--Other cohort (write in name)
	--Other data source (write in source)
	--Sharing data and using shared data
	Large-scale Data Collection Effort
	--Animal model data
	--Environmental Data
	--Epidemiological data
	--Epigenomic Data
	--Exposure/biomonitoring/biomarker data
	--Genomic Data
	--Imaging data
	--Other Data
	--Other clinical data
	--Proteomic and protein sequence/structure data
	--RNA/transcriptome gene expression data
	--Social and demographic data
	Specimen / Sample Sharing
	--Biological samples
	--Model organisms
Social Science	Social Science Issues
	SI: Other
	SI: Not Relevant
	Border / Immigrant Communities
	Community Engagement
	--Community education
	--Community web tools
	--Community-based participatory research
	--Partnerships with federal / state / local / tribal representatives
	--Partnerships with schools / teachers / museums
	--Research translation
	--Risk communication
	Community Resilience

## Grant Coding Database Attributes

**LOOKUP\_NAME**

**LOOKUP\_VALUE**

	Community-Based Prevention / Interventions
	ELSI (Ethical Legal Social Issues)
	Economics / Cost Benefit
	Environmental Justice
	Policy and Health
	Social Determinants of Health
	--Built environment and health
	Vulnerable Populations / Health Disparities
	--Gender based
	--Low-income / low-SES populations
	--Native populations
	--Racial / ethnic minorities
	--Rural populations
	--Urban populations
Landmark Program	Landmark Program
	LP: Not Relevant
	LP: Autism Research
	LP: Bisphenol A (BPA) Research Program
	LP: Climate Change
	LP: DNA Repair Research
	LP: DOHaD
	LP: Environmental Epigenetics
	LP: Exposure Biology Research Program
	LP: Global Environmental Health
	LP: Gulf Oil
	LP: Nanotechnology
	LP: Oceans / Human Health
	LP: PEPH
	LP: Worker Training / Occupations
	MDB: Inflammation for Sri
	MDB: Superfund with Children's Health
	^LP: Breast Cancer & the Environment Research Program
	^LP: Centers for Neurodegeneration Science
	^LP: Children's Env Health Centers (Centers Grants Only)
	^LP: Core Centers
	^LP: Outstanding New Environmental Scientist Award (ONES)
	^LP: Superfund Research Program
	^LP: Training (T grants only)
	^LP: WTP
Scientific Focus Group	Scientific Focus Group assignment
	SFG: Not Relevant
	SFG Recommendation Made (do not use, add all checks here)
	AhR / Cytochrome P450
	Air Pollution SFG
	Autism SFG
	Breast Cancer SFG
	Cancer and the Environment SFG
	Cardiovascular Health
	Children's Environmental Health SFG
	Climate Change SFG
	DNA Repair SFG
	DOHAD SFG

## Grant Coding Database Attributes

**LOOKUP\_NAME**

**LOOKUP\_VALUE**

	Deep Water Horizon SFG
	Endocrine Disruptors/BPA SFG
	Endocrine Disruptors/Gen SFG
	Epigenetics (CCT)
	Epigenetics/Epigenomics SFG
	Exposome (CCT)
	Exposure Biology SFG
	Global Environmental Health (CCT)
	GxE SFG
	Health Disparities (CCT)
	Immunology/Microbiome SFG
	Inflammation (CCT)
	Knowledge Management and e-Science (CCT)
	Metabolic Disorders SFG
	Mitochondrial Dysfunction
	Nanotechnology/Nanotoxicology SFG
	Neurodegeneration SFG
	Neurodevelopment SFG
	Nutrition SFG
	Oceans/Human Health SFG
	Oxidative Stress
	Predictive Toxicology and Disease (CCT)
	Reproductive Health: Female SFG
	Reproductive Health: Male SFG
	Resistance and Susceptibility
	Stem Cells (CCT)
	Training SFG
	Website and Social Media (CCT)
	^Children's Environmental Health Centers SFG
	^Core Centers SFG
	^SBIR/STTR SFG
	please use LP: ^Superfund SFG
<b>Strategic Plan Themes</b>	<b>Relevant Themes: NIEHS Strategic Plan (primary, secondary, and special mention)</b>
	Theme 1: Fundamental Research
	Theme 2: Exposure Research
	Theme 3: Translational Science
	Theme 4: Health Disparities and GEH
	Theme 5: Training and Education
	Theme 6: Communications and Engagement
	Subproject has no relevant theme
	Cross-cutting theme: Knowledge Management
<b>Strategic Plan Goals</b>	<b>Relevant NIEHS Strategic Plan Goals and Subgoals (primary, secondary, and special mention)</b>
	1. Fundamental mechanisms
	--1a. Effects on genome structure / function
	--1b. Effects on epigenetic program
	--1c. ID mechanisms of resistance vs. susceptibility
	--1d. Development and aging
	--1e. Integrate HTS, cell system, and/or model organisms
	2. Individual susceptibility
	--2a. ID critical windows of susceptibility
	--2b. Deepen understanding of dose-response relationships

## Grant Coding Database Attributes

**LOOKUP\_NAME**

**LOOKUP\_VALUE**

--2c. Study factors that determine individual susceptibility
<b>3. Exposure science</b>
--3a. Improve exposure assessment - populations and individuals
--3b. Exposome - define and communicate the concept
--3c. Create tools and technologies to characterize the exposome
<b>4. Combined environmental exposures</b>
--4a. Assess joint actions of multiple environmental insults on toxicity and disease
--4b. Study role of microbiome in response to environmental agents
--4c. Study interactions of infectious agents combined with environmental exposures
--4d. Assess role of non-chemical exposures and ID possible preventative measures
<b>5. Emerging health threats</b>
--5a. Use EHS data to elucidate information, determine public health approach
--5b. Cooperate with public health partners
--5c. Focus on research needs to inform policy
<b>6. Health disparities</b>
--6a. Conduct community based, culturally aware, participatory research
--6b. Conduct research and education on ELSI
--6c. Develop, implement interventions to reduce exposures for affected populations
<b>7. Knowledge management</b>
--7a. Develop bioinformatics, biostatistics, and data integration tools
--7b. Develop publicly available (Web) resources / tools for integration / analysis of data
<b>8. Teaching, education, and training</b>
--8a. Educate all to improve health decisions
--8b. Leadership, partnership, strategies, and mechanisms to promote EHS education
--8c. Develop training programs (students; postdocs; teachers; foreign students)
--8d. Foster EHS training to medical education (health care professionals)
<b>9. Training new research scientists</b>
--9a. Foster cross-disciplinary training - esp. informatics / engineering / behavioral
--9b. Recruit from other disciplines to diversify skill sets
--9c. Consider full career trajectory of scientist and provide opportunities
--9d. Promote integration of EHS into medical training, doctors and nurses
--9e. Build EHS research capacity in countries with biggest EH problems
--9f. Increase diversity within training programs
<b>10. Minimize economic impacts</b>
--10a. Train in EH Economics to evaluate cost / benefits of exposures, interventions
--10b. Measure econ benefits of NIEHS investments
--10c. Assist policymakers with state-of-science assessments
<b>11. Bidirectional communication</b>
--11a. Public image - promote NIEHS as trusted source
--11b. Identify and expand stakeholder community and enhance engagement
--11c. Build and lead long-term partnerships with federal and nonfederal groups
--11d. Research in effective communication
--11e. Develop integrated, searchable knowledge base of EH information
<b>Admin and support</b>
--No Subgoal