

## Summary of NIH Funded CFS Research 1999-2003

<u>Year</u>	<u>No. of Studies Funded as CFS</u>	<u>No. of Studies Mentioning CFS in Abstract</u>	<u>% of Total</u>
1999	34	32	94.1%
2000	36	32	88.9%
2001	32	26	81.3%
2002	35	22	62.9%
2003	20	14	70.0%

---

### Notes:

1. The number of studies listed refers to discreet studies funded as shown on the NIH Website at <http://www4.od.nih.gov/orwh/CFS-newhome.html> . In cases where studies are shown twice with the same grant number, they were counted only once, even though multiple units of NIH may have contributed to their funding and/or supervision.
2. Simply mentioning CFS in the grant abstract is a low threshold for determining that the study was directly related to CFS. In some cases, it is clear that less than 100% of the study focus was directly on CFS.
3. The percentage of total studies mentioning CFS in their abstracts most likely does not correlate to the percentage of total funding charged to the CFS budget. These figures are not currently publicly available, although the public most certainly paid for them.
4. Finally, this analysis assumes that the data included in the NIH Web site shown above is correct in all respects.

## 1999 NIH Funded CFS Research

<u>Title</u>	<u>Grant No.</u>	<u>Trial Focus</u>	<u>CFS in Abstract</u>
Orthostatic Intolerance in CFS	5R01HL059459-02		YES
Circulatory Control in Young People with Chronic Fatigue	5R01HL062385-02		YES
Muscle Blood Flow and CFS	5R01HL065179-01		YES
Motor Learning in CFS—Neural Dysfunction Implication	1R01NS038337-01A1		YES
Brain and Cardiovascular Studies	2U01AI032247-090006		YES [1]
Physiological Challenges in CFS	2U01AI032247-09007		YES
Core—Patient Accrual and Data Analysis Facility	2U01AI032247-099003		YES [1]
Motor Control in CFS	5R01AI034250-06		YES
Mechanisms of Immunologically Mediated Fatigue	5R01AI035110-05		YES
Estimating Rates of CFS in a Community Sample	5R01AI036295-05		YES
Dysregulated 2-5A Synthetase/Rnase L/PKR Pathways in CFS	5R01AI038378-03		YES
Monozygotic Twins with CFS – Predisposition or Perception?	2U19AI038429-050005		YES
Core—Clinical Facility	2U19AI038429-059002		YES
Population Based Twin Study of CFS	2U19AI038429-050006		YES
Children of CFS Patients	2U19AI038429-050007		YES
Core—Biostatistical and Data Management Facility	2U19AI038429-059001		YES
Model for Induction of Chronic Fatigue Study	5R01AI0410990-02		YES
Autoantibodies to Cellular Matrix Antigens in CFS	5R01AI041033-03		YES
Mechanisms of Rhinitis in CFS	5R01AI042403-03		YES
Cognitive Behavioral Stress Management Intervention for CFS	1U01AI045940-010002		YES

## 1999 NIH Funded CFS Research (p. 2)

<u>Title</u>	<u>Grant No.</u>	<u>Trial Focus</u>	<u>CFS in Abstract</u>
Effect of Stress and CBSM on Natural Killer Cell Activity in CFS	1U01AI045940-010004		YES
Core—Laboratory Facility	1U01AI045940-019003		YES
Venous Dysfunction in CFS	5R03AI045954-02		YES [1]
Siberian Ginseng for the Treatment of CFS	5R03AI045982-02		YES [1]
Fludrocortisone for Individuals with CFS and Hypotension	1Z01AI000812-03		YES
HPA Axis Dysregulation in Fibromyalgia	3M01RR000042-39S11009		YES
Auditory Working Memory in CFS---An FMRI Study	1R01MH057272-01A1		YES
Research Center on the Psychobiology of Ethnicity	5R01MH047193-10		NO
The Neurobiology of Major Depression	1Z01MH002659-07		NO
Evaluation of Muscle Function in Persian Gulf Veterans	5M01RR000040-390711		YES
Muscle Blood Flow and CFS	1R01HL065179-01		YES [1]
Mitochondria in Chronic Fatigue Syndrome Pathophysiology	3M01RR000046-39S21069		YES
Model for Induction of Chronic Fatigue Study	5M01RR000051-381090		YES
Exercise Intolerance in Chronic Fatigue Syndrome	5M01RR000425-300573		YES

---

Note:

1. No abstract text available, but study presumed to be CFS-related.

## 2000 NIH Funded CFS Research

<u>Title</u>	<u>Grant No.</u>	<u>Trial Focus</u>	<u>CFS in Abstract</u>
RBC Mass, ANS Integrity & Syncope Susceptibility in CFS	1R01HL065668-01		YES
Orthostatic Intolerance in CFS	5R01HL059459-03		YES
Circulatory Control in Young People with Chronic Fatigue	5R01HL062385-03		YES
Muscle Blood Flow and CFS	5R01HL065179-02		YES
Comprehensive Center for Inflammatory Disorders	3P60DE013079-01S1		NO
Clinical Neurocardiology: Catecholamine Systems in Stress and Disease	1Z01NS002979-03	Parkinson's Disease/ pheochromocytoma	NO
Brain and Cardiovascular Studies	5U01AI0322747-100006		YES [1]
Physiological Challenges in CFS	5U01AI032247-10007		YES [1]
Core—Patient Accrual and Data Analysis Facility	5U01AI032247-109003		YES [1]
Population Based Twin Study of CFS	5U19AI038429-060006		YES
Model for Induction of Chronic Fatigue Study	5R01AI0410990-03		YES
Cognitive Behavioral Stress Management Intervention for CFS	5U01AI045940-020002		YES
Effect of Stress and CBSM on Natural Killer Cell Activity in CFS	5U01AI045940-020004		YES
Core—Biological Assessment Laboratory	5P50CA084944-029002		YES
Core—Patient Accrual and Data Analysis Facility	5U01AI032247-109003		YES [1]
Mechanisms of Immunologically Mediated Fatigue	5R01A1035110-06		YES
Monozygotic Twins with CFS – Predisposition or Perception?	5U19AI038429-060005		YES
Children of CFS Patients	5U19AI038429-060007		YES
Core—Clinical Facility	5U19AI038429-069002		YES
Facility Core—Biostatistical and Data Management Facility	5U19AI038429-079001		YES

## 2000 NIH Funded CFS Research (p. 2)

<u>Title</u>	<u>Grant No.</u>	<u>Trial Focus</u>	<u>CFS in Abstract</u>
Autoantibodies to Cellular Matrix Antigens in CFS	5R01AI041033-04		YES
Cognitive Behavioural Stress Management Intervention for CFS	5U01AI045940-020002		YES
Effect of Stress and CBSM on Natural Killer Cell Activity in CFS	5U01AI045940-020004		YES
Core—Laboratory Facility	5U01AI045940-029003		YES
Venous Dysfunction in CFS	5R03AI045954-02		YES [1]
Siberian Ginseng for the Treatment of CFS	5R03AI045982-02		YES [1]
Activity Intervention for Chronic Fatigue Syndrome	5R01AI049720-01		YES
Coord Ctr for Clin & Epidem Studies in Infectious Diseases	3N01AI015131-020		NO [2]
Fludrocortisone for Individuals with CFS and Hypotension	1Z01AI000812-04		YES
Auditory Working Memory in CFS---An FMRI Study	5R01MH057272-02		YES
HPA Axis Dysregulation in Fibromyalgia	5R01AR043148-06		YES
Muscle Blood Flow and CFS	5R01HL065179-02		YES [1]
Stress, Adrenergic & Inflammatory Factors in RA, CFS	5M01RR000046-401141		YES
Model for Induction of Chronic Fatigue Study	5M01RR000051-391090		YES
Trial of Fludrocortisone for CFS	2M01RR000052-390751		YES
Chronic Fatigue in Post Lyme Disease	5M01RR010710-030029	Antibiotic treatment for chronic fatigue following Lyme Disease.	NO
Nasal Steroids & Chronic Fatigue Syndrome Induced Sleep Disturbance	2M01RR010732-060186		YES

---

Notes:

1. No abstract text available, but study presumed to be CFS-related.
2. No abstract text available. However, presumed not to focus on CFS.

## 2001 NIH Funded CFS Research

<u>Title</u>	<u>Grant No.</u>	<u>Trial Focus</u>	<u>CFS in Abstract</u>
Circulatory Dysfunction in CFS	5R01HL066007-01A1		YES
Orthostatic Intolerance in CFS	5R01HL059459-04		YES
Muscle Blood Flow and CFS	5R01HL065179-04		YES
RBC Mass, ANS Integrity & Syncope Susceptibility in CFS	5R01HL065668-03		YES
Comprehensive Center for Inflammatory Disorders	5P60DE013079-03		NO
Pathophysiology of Neuroimmune Communication	1R01NS040098-01A2		YES
A Twin Study of CFS in Sweden	1R01NS041483-01		YES
Motor Learning in CFS—Neural Dysfunction Implication	5R01NS038337-03		YES
Clinical Neurocardiology: Catecholamine Systems in Stress	1Z01NS002979-03	Parkinson's Disease/ pheochromocytoma	NO
Brain and Cardiovascular Studies	5U01AI0322747-110006		YES [1]
Physiological Challenges in CFS	5U01AI032247-11007		YES [1]
Core—Patient Accrual and Data Analysis Facility	5U01AI032247-119003		YES [1]
Mechanisms of Immunologically Mediated Fatigue	5R01AI035110-07		YES
Monozygotic Twins with CFS – Predisposition or Perception	5U19AI038429-070005		YES
Population Based Twin Study of CFS	5U19AI038429-070006		YES
Children of CFS Patients	5U19AI038429-070007		YES
Core—Clinical Facility	5U19AI038429-079002		YES
Core—Biostatistical and Data Management Facility	5U19AI038429-079001		YES
Mechanisms of Rhinitis in CFS	5R01AI042403-04A1		YES [1]
Cognitive Behavioral Stress Management Intervention for CFS	5U01AI045940-030002		YES

## 2001 NIH Funded CFS Research (p. 2)

<u>Title</u>	<u>Grant No.</u>	<u>Trial Focus</u>	<u>CFS in Abstract</u>
Effect of Stress and CBSM on Natural Killer Cell Activity in CFS	5U01AI045940-030004		YES
Core—Laboratory Facility	5U01AI045940-049003		YES [1]
Venous Dysfunction in CFS	5R03AI045954-03		YES [1]
Activity Intervention for Chronic Fatigue Syndrome	5R01AI049720-02		YES
Psychiatric Comorbidity in CFS	1K23MH001961-01A1		YES
Auditory Working Memory in CFS---An FMRI Study	5R01MH057272-03		YES
Muscle Blood Flow and CFS	5R01HL065179-03		YES [1]
Model for Induction of Chronic Fatigue Study	5M01RR000051-401090		YES [1]
Clinical Benefit of Midodrine HCL In Patients w/ Neurogenic Orthostatic H	3M01RR000645-30S10867		NO [2]
HER Receptor Family, Heregulin and Lung Development	7R01HL060165-03	Biological role of the HRG/HER system in the regulation of lung development and pulmonary epithelial cell development.	NO
Chronic Fatigue in Post Lyme Disease	5M01RR010710-040029	Antibiotic treatment for chronic fatigue following Lyme Disease.	NO
Neuroendocrinology of Masticatory Muscle Disorders	5R01DE011972-05		NO

---

Notes:

1. No abstract text available, but study presumed to be CFS-related.
2. No abstract text available. However, presumed not to focus on CFS.

## 2002 NIH Funded CFS Research

<u>Title</u>	<u>Grant No.</u>	<u>Trial Focus</u>	<u>CFS in Abstract</u>
Transcriptional Regulation of E-Selectin	5R01HL045462-13	Vascular disease	NO
Reactive Species in Vascular Disease-Injury Mechanisms	5R01HL054926-05 A1	Endogenously generated NO as a mediator of cellular metabolism and respiration that enables cells to resist oxidative stress	NO
Molecular Basis for Protein-Phospholipid Interaction	2R01HL055591-06	Role of lipids in human disease	NO
Mechanisms by which IGF-1 Stimulates Smooth Muscle Cells	2R01HL056850-06	To alter the progression of arteriosclerosis	NO
Muscle Blood Flow and CFS	5R01HL065179-04		YES
RBC Mass, ANS Integrity & Syncope Susceptibility in CFS	5R01HL065668-03		YES
Circulatory Dysfunction in CFS	5R01HL066007-02		YES
Skin Cooling to Improve Orthostatic Tolerance	1R01HL067422-01A1		NO
Endothelial Cell Dysfunction in Oxidative Stress Models	5R01HL070215-01	High glucose/diabetes	NO
Comprehensive Center for Inflammatory Disorders	3P60DE01307903S1		NO
Brain and Cardiovascular Studies	5U01AI0322747-120006		YES
Physiological Challenges in CFS	5U01AI032247-12007		YES
Renewal of the New Jersey CFS CRC	5U01AI032247-12		YES
Monozygotic Twins with CFS – Predisposition or Perception	5U19AI038429-080005		YES
Children of CFS Patients	5U19AI038429-080007		YES
Core—Clinical Facility	5U19AI038429-089002		YES
Core—Biostatistical and Data Management Facility	5U19AI038429-089001		YES
Mechanisms of Rhinitis in CFS	5R01AI042403-05		YES
Cognitive Behavioral Stress Management Intervention for CFS	5U01AI045940-040002		YES

## 2002 NIH Funded CFS Research (p. 2)

<u>Title</u>	<u>Grant No.</u>	<u>Trial Focus</u>	<u>CFS in Abstract</u>
Effect of Stress and CBSM on Natural Killer Cell Activity in CFS	5U01AI045940-040004		YES
Core—Laboratory Facility	5U01AI045940-049003		YES [1]
Activity Intervention for Chronic Fatigue Syndrome	5R01AI049720-03		YES
Viral dsRNA as a Mediator of Chronic Muscle Diseases	5R01AI051270-01		YES
Psychiatric Comorbidity in Chronic Fatigue Syndrome	5K23MH001961-02		YES
Are Fibromyalgia and Chiari I Malformation Related?	5R01AR047678-01A1		YES
Phosphocreatine Recovery in Women With CFS	5P41RR002305-190029		YES
Pain Perception and Health Care Seeking Behavior in Fibromyalgia	5M01RR000032-420582		NO
HPA Axis Dysregulation in Fibromyalgia	5M01RR000042-421009		NO
Stress, Adrenergic and Inflammatory Factors in 4 Disorders	5P60DE013079-040008		YES
Responsiveness of the Aging Circadian Clock to Light	5R01HL067604-03	Improved treatment for circadian rhythm and sleep disorders in older adults	NO
Trial of Fludrocortisone for CFS	5M01RR000052-410751		YES
Neurally Mediated Syncope and Salt Intake Levels	5M01RR0000645-310940		NO [2]
Regulation of Adrenal Function in Fibromyalgia	5M01RR02635-200504		YES
Aldosterone—A Cardiovascular Risk Factor	5R01HL063423-04	Aldosterone as a pathogenic hormone in cardiovascular disease	NO
Chronic Low Back Pain as a Model of Fibromyalgia	5R01AR046049-04		NO

---

Notes:

1. No abstract text available, but funding presumed to be CFS-related given the nature of the studies for which the Core grant was requested as support.
2. No abstract text available. However, presumed not to focus on CFS.

## 2003 NIH Funded CFS Research

<u>Title</u>	<u>Grant No.</u>	<u>Trial Focus</u>	<u>CFS in Abstract</u>
Transcriptional Regulation of E-Selectin	5R01HL045462-14	Vascular disease	NO
Reactive Species in Vascular Disease-Injury Mechanisms	5R01HL054926-06	Endogenously generated NO as a mediator of cellular metabolism and respiration that enables cells to resist oxidative stress	NO
Mechanisms by which IGF-1 Stimulates Smooth Muscle Cells	5R01HL056850-07	To alter the progression of arteriosclerosis	NO
Orthostatic Intolerance in CFS	2R01HL059459-05A1		YES
RBC Mass, ANS Integrity & Syncope Susceptibility in CFS	5R01HL065668-04		YES
Circulatory Dysfunction in CFS	5R01HL066007-03		YES
Skin Cooling to Improve Orthostatic Tolerance	5R01HL067422-02		NO
Endothelial Cell Dysfunction in Oxidative Stress Models	5R01HL070215-02	High glucose/diabetes	NO
Pathophysiology of Neuroimmune Communication	5R01NS040098-03		YES
A Twin Study of CFS in Sweden	5R01NS041483-03		YES
Clinical Neurocardiology: Catecholamine In Stress & Disease	1Z01NS002070-05		NO
Mechanisms of Rhinitis in CFS	5R01AI042403-06		YES
Activity Intervention for Chronic Fatigue Syndrome	5R01AI049720-04		YES
Viral dsRNA as a Mediator of Chronic Muscle Diseases	5R01AI051270-02		YES
Sleep and Cytokines in Chronic Fatigue Syndrome	1R21AI054478-01		YES
Psychiatric Comorbidity in Chronic Fatigue Syndrome	5K23MH001961-03		YES
Are Fibromyalgia and Chiari I Malformation Related?	5R01AR047678-02		YES
Role of Fatigue in Rheumatic Diseases	1U13AR050277-01		NO
Regulation of Adrenal Function in Fibromyalgia	5M01RR02635-190504		YES
Chronic Fatigue Syndrome in Adolescents	1R01HD043301-01A1		YES