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**Serious and Other Selected Adverse Events  
Reported for Human Gene Transfer Protocols  
NIH Office of Biotechnology Activities  
December 2009**

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Protocol Number: **523**

Protocol Title: **Phase I Trial of Intraperitoneal Administration of a) a CEA-Expressing Derivative, and b) a NIS-Expressing Derivative Manufactured from a Genetically Engineered Strain of Measles Virus in Patients with Recurrent Ovarian Cancer**

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DocID#	Receipt Date	Event Description
10488	08/14/2009	The subject experienced fever, shaking, nausea, vomiting and diarrhea after the second infusion of the vaccine and was admitted to the hospital for evaluation. The subject was treated with antibiotics and medications for nausea. Symptoms resolved the next day and the subject was discharged.

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Protocol Number: **530**

Protocol Title: **A Randomized, Phase II/III Study of TNFerade™ Biologic with 5-FU and Radiation Therapy for First-Line Treatment of Unresectable Locally Advanced Pancreatic Cancer.**

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DocID#	Receipt Date	Event Description
10542	10/05/2009	Two days after the dose of the study agent, the subject was admitted to the hospital due to complaints of nausea, vomiting and dehydration. The subject was discharged after two weeks. The subject continued to have these symptoms after discharge.
10532	09/25/2009	The subject developed fever and chills at home approximately 3 hours after the second study agent injection. That same day, the subject returned to the hospital for scheduled radiation therapy and was found to have a low blood pressure with an increased heart rate. Although the subject was noted to have a low grade temperature, there were no other symptoms noted. The subject's blood pressure improved and the subject was discharged. The subject has recovered and the event is considered to be resolved. No action was taken with TNFerade. The investigator assessed the event as possibly related to the study agent and possibly related to the administration procedure.

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Protocol Number: 661

Protocol Title: **A Phase 2, Randomized, Double-Blind, Placebo-Controlled, Parallel-Group, Multicenter, Dose-Selection Study of Ad2/Hypoxia Inducible Factor (HIF)-1 $\alpha$ /VP16 in Patients with Intermittent Claudication.**

DocID#	Receipt Date	Event Description
10524	09/17/2009	Approximately two years after receiving the study agent (gene transfer agent or placebo), this elderly subject was diagnosed with ductal carcinoma in-situ, a type of breast cancer, after an abnormal screening mammogram. The subject is hospitalized with surgery scheduled. The subject had two previous mammograms that were read as normal.

Protocol Number: 778

Protocol Title: **A Feasibility Study of Combination Therapy with Trastuzumab, Cyclophosphamide, and an Allogeneic GM-CSF-Secreting Breast Tumor Vaccine for the Treatment of HER-2/neu-Overexpressing Metastatic Breast Cancer**

DocID#	Receipt Date	Event Description
10471	08/05/2009	The subject developed an extensive rash and itching after the second vaccine and required treatment with steroids and overnight admission to the hospital. Although itching and rash are associated with the vaccine, the severity of this event was unexpected.

Protocol Number: 792

Protocol Title: **A Phase I, Dose-Escalation, Single Center Study to Assess the Safety and Tolerability of VM202 in Subjects with Critical Limb Ischemia**

DocID#	Receipt Date	Event Description
10479	08/11/2009	The subject was diagnosed with early colon cancer approximately 9 months after the last dose of the study agent.

Protocol Number: 798

Protocol Title: **A Phase I/II Study of Active Immunotherapy with GRNVAC1, Autologous Mature Dendritic Cells Transformed with mRNA Encoding Human Telomerase Reverse Transcriptase (hTERT), in Patients with Acute Myelogenous Leukemia (AML) in Complete Clinical Remission**

DocID#	Receipt Date	Event Description
10449	07/17/2009	The subject presented with low platelet counts over a month after the last dose of the study agent. This appeared to be an immune reaction and while platelet levels improved with steroids, the event is not resolved. A relationship to the gene transfer is possible.

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Protocol Number: 809

Protocol Title: **A Phase 1/2 Randomized, Double-Blinded, Placebo-Controlled Dose Escalation Trial of Intracoronary Administration of MYDICAR™ (AAV1/SERCA2a) in Subjects with Heart Failure**

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DocID#	Receipt Date	Event Description
10535	09/30/2009	The subject underwent angiography of the coronary arteries (vessels supplying blood to the heart) with infusion of either the study agent or placebo. The next day, the subject complained of itchiness over the neck and back. The following day, the subject developed a red rash on the trunk and head that was considered likely a reaction to either the intravenous contrast that was administered into the arteries or the delivery mechanism for administering the study therapy. The subject was treated with antihistamines and was kept an additional day in the hospital. The rash improved and subject was discharged the next day. When the subject was seen in clinic for a scheduled week two study visit, the event was considered resolved.

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Protocol Number: 881

Protocol Title: **Phase 1b, Open Label Trial to Define the Safety, Tolerance, Transgene Function, and Immunological Effects of Intratumoral Injection(s) of Adenoviral Transduced Autologous Dendritic Cells Engineered to Express hIL-12 Under Control of The RheoSwitch® Therapeutic System in Subjects With Stage III and IV Melanoma**

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DocID#	Receipt Date	Event Description
	09/15/2009	Eight hours post study agent infusion, the subject developed low blood pressure that was thought to be possibly related to the drug used to activate expression of the gene for Interleukin-12. The subject was treated with intravenous fluids and was held for one additional day per protocol.

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Protocol Number: 920

Protocol Title: **Phase I/II Study of Metastatic Cancer that Expresses Her-2 Using Lymphodepleting Conditioning Followed by Infusion of Anti-Her-2 Gene Engineered Lymphocytes**

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DocID#	Receipt Date	Event Description
10550	10/13/2009	Fifteen minutes after the completion of cell infusion, the subject experienced difficulty breathing. Due to progressively worsening difficulty, the subject had a tube placed in the mouth to assist with breathing and was admitted to the intensive care unit. That evening, the subject's heart stopped two times. After resuscitation, the sedation was decreased and the subject was able to follow commands. Later during this admission, the subject suddenly developed an abnormally low heart rate and blood pressure and the heart stopped. Aggressive resuscitation was performed for 1 hour. The subject expired. An autopsy was performed and indicated massive bleeding in the setting of microangiopathic (small vessel) injury. (See Morgan, R.A. et. al., case report of a serious adverse event following the administration of T-cells transduced with a chimeric antigen receptor recognizing ERBB2 Molecular Therapy 18(4) 661-2 (2010)

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Protocol Number: 925

Protocol Title: Phase I/II Study of Metastatic Cancer that Expresses Carcinoembryonic Antigen (CEA) Using Lymphodepleting Conditioning Followed by Infusion of Anti-CEA TCR-Gene Engineered Lymphocytes

DocID#	Receipt Date	Event Description
10499	08/21/2009	The subject started chemotherapy and received cells followed by 6 doses of interleukin-12, which was stopped after the subject developed an infection. The subject was transferred to the Intensive Care Unit for fever, confusion and difficulty speaking, which cleared over the next several days. The subject complained of mild stomach discomfort and bloody diarrhea. An endoscopy revealed diffuse inflammation of the colon, stomach and beginning region of the small intestine. A repeat colonoscopy showed improvement. The subject otherwise is well and is now eating and preparing for discharge.
10523	09/17/2009	The subject received the study agent followed by nine doses of interleukin-2, which had to be stopped as the subject became short of breath. The subject was then transferred to the intensive care unit (ICU) for fever, increased heart rate, increased shortness of breath and bloody diarrhea. The subject had a colonoscopy which showed inflammation of the colon which was attributed to the study agent.

Protocol Number: 947

Protocol Title: A Randomized Phase 3 Clinical Trial to Evaluate the Efficacy and Safety of a Treatment with OncoVEXGM-CSF Compared to Subcutaneously Administered GM-CSF in Melanoma Patients with Unresectable Stage IIIb, IIIc and IV Disease

DocID#	Receipt Date	Event Description
10506	08/31/2009	The subject had swelling of a right side neck lymph node that was not injected with the study agent along with mild pain and difficulty swallowing. The subject was treated with steroids and the event was considered resolved. The Investigator considered the adverse event an important medical event and the causal relationship to the study medication as possibly related. The subject was discontinued from further study treatment.

Protocol Number: 1029

Protocol Title: A Phase II Study of Repeat Intranodal Injections of Adenovirus-CD154 (Ad-ISF35) in Subjects with Non-Hodgkins Lymphoma (Follicular, Diffuse Large Cell, Mantle Cell and Small Lymphocytic Lymphoma/Chronic Lymphocytic Leukemia)

DocID#	Receipt Date	Event Description
10529	09/23/2009	After receiving the 3rd injection, the subject complained of muscle pain, weakness and fever. The subject was admitted to the hospital for hydration and observation. The subject was treated with intravenous fluids and Tylenol.