IRMS REPRODUCTIVE MEDICINE at Saint Barnabas

DONOR SCREENING QUESTIONNAIRE

Name: _____ Date: _____

The United States Food and Drug Administration has issued its final rule on eligibility for human cells, tissues, and cellular and tissue-based products. Effective in 2005, donors of reproductive tissue are subject to the same screening and testing as donors of bone-marrow, blood, kidneys, and other organs. The regulations require that IRMS perform an eligibility determination for cell and tissue donors, based on testing and screening for relevant communicable diseases. This is for the protection of possible recipients of the tissue, as well as those people who may handle or come in contact with the tissue.

Please read and answer the following questions carefully. We recognize that some of the questions are of a sensitive nature, and thank you for providing the most accurate information.

		YES	NO
1.	Are you in generally good health?		
2.	In the past 12 months have you or your partner had a blood transfusion?		
3.	In the past 5 years have you had sexual contact with a man who has had sexual contact, either anal or oral with another man?		
4.	Have you injected drugs for a non-medical reason in the last 5 years, including intravenous, intramuscular, or subcutaneous injection?		
5.	Have you received human-derived clotting factor concentrates for hemophilia or a related clotting disorder?		
6.	Have you had sex for drugs or money in the past 5 years?		
7.	Have you had sex in the past 12 months with anyone who would answer yes to the above 3 questions?		
8.	In the past 12 months, have you had sex with a man who has had sex with another man in the past 5 years?		
9.	In the past 12 months, have you had sex with a person known or suspected to have HIV, or active hepatitis B or C?		
10.	In the past 12 months, have you been exposed to known or suspected HIV, hepatitis B, and/or hepatitis C infected blood through percutaneous inoculation, contact with an open wound, non-intact skin, or mucous membrane?		
11.	In the past 12 months, have you been in close contact (i.e. sharing kitchen and bathroom) with a person having active viral hepatitis?		
12.	In the past 12 months, have you had tattooing, ear or body piercing, acupuncture, or electrolysis in which sterile conditions were **not** used?		
	▪ Tattoos (Date:)		
	▪ Acupuncture/electrolysis (Date:)		
	▪ Ear, skin or body piercing (Date:)		
13.	In the past 12 months, have you had an accidental needle stick, sharp instrument injury, contact w/human blood serum or plasma in the eye, mucus membranes (lips, interior of nose) or sores?		
14.	After age 11, have you ever had viral hepatitis that was **not** caused by Hepatitis A, Epstein-Barr Virus (EBV) or Cytomegalovirus (CMV)?		
15.	Have you received or had intimate contact (i.e. exchanged body fluids, including sharing toothbrushes and razors) with someone who has received organs or cells from non-human sources?		

16.	Have you had a recent smallpox vaccination or had close contact with the vaccination site of anyone else in the preceding 8 weeks?		
17.	In the past 12 months have you had any immunizations or vaccinations? ***If yes: Type:_____? Date:_____?***		
18.	Have you had **both** a headache **and** fever within the last 7 days? ***If yes: When_____? For how long_____?***		
18a.	Have you been diagnosed with West Nile virus in the past 120 days?		
19.	Have you ever received growth hormone made from human pituitary glands?		
20.	Have you ever received a dura mater (brain covering) graft?		
21.	Have you or any of your relatives ever had a Creutzfeldt-Jakob disease?		
22.	In the past 12 months, have you had a positive syphilis test?		
23.	In the past 12 months, have you had or been treated for syphilis, chlamydia or gonorrhea?		
24.	In the past 12 months, have you been in jail for more than 72 hours in a row?		
25.	From 1980 through 1996, were you a member of the US military, a civilian military employee or a dependent of a member of the US military? ***If yes, proceed to #25a; otherwise, go to #26.***		
25a.	From 1980-1990 did you spend a total time of 6 months or more associated with a military base in any of the following countries: Belgium, The Netherlands or Germany?		
	From 1980-1996 did you spend a total time of 6 months or more associated with a military base in any of the following countries: Spain, Portugal, Turkey, Italy, or Greece?		
26.	Since 1980, have you ever lived in or traveled to Europe? ***If yes: Where_____? Dates:_____?*** ***How long_____?*** ***If yes, proceed to #26a; otherwise skip to #27.***		
26a.	▪ Between 1980 and 1996 did you spend time that adds up to 3 months or more in the UK. *(Includes: England, Ireland, Scotland, Wales, Isle of Man, Channel Islands, Gibraltar or the Falkland Islands)*		
	▪ Have you received a transfusion of blood, platelets, plasma, cryoprecipitate, or granulocytes in the UK or France from 1980 to the present?		
	▪ Since 1980 have you spent time that adds up to 5 years or more in Europe (including time spent in the UK between 1980 and 1996)?		
27.	Were you or any of your sexual partners born, lived in, or traveled to any of the following African countries: Cameroon, Central Africa, Chad, Congo, Equatorial Guinea, Gabon, Niger, or Nigeria since 1977? ***If yes, proceed to #27a; otherwise, go to #28.***		
27a.	Did you or any of your sexual partners receive a blood transfusion or any other medical treatment with a product made from blood in these countries?		
28.	Have you ever undergone a xenotransplantation (transplantation, implantation, or infusion of live cells, tissues, or organs from a non-human animal source) procedure or had intimate contact with a xenotransplantation recipient? ***If yes: When_____?***		

Your complete honesty in answering these questions is very important for the safety of the recipients of your donated gametes. All of the information you provide will be confidential.

Printed Name: _____

Signature: _____ Date: _____

UNIFORM DONOR APPLICATION FORM

Before proceeding with your answers, please READ all instructions.

Date filled out: _____/_____/_____ (Month/Day/Year)

To become a sperm or egg donor, we need to learn some information about your personal and medical history. Your responses to these questions will help us to make sure that your health and medical history are compatible with the donation process and in particular for egg donors that it will not involve any increased risks for you. This effort will also help us to match you to an appropriate recipient.

Please provide complete and accurate information to these questions. If you do not know the answer, ask a parent or family member. Any information you provide during the donation process will remain completely confidential. The information from this questionnaire will be given to the recipient(s) minus all identifying information which is removed.

A "yes" response will not necessarily eliminate you as a potential donor. Most people will have at least one of these conditions in themselves or a family member. The accuracy of the information you will be giving will provide information to potential families you may help to create.
Instructions:

1. **Please fill in all blanks completely.** Please complete all questions and write "N/A" if not applicable.
2. Please be specific. Avoid expressions such as "natural" or "old age" (for causes of death). List any health problems as specifically as possible. If you do not know the age, put the approximate age or ask a relative to help you. List exact relationships such as "first cousin through my mother's sister"
3. Please provide information on all the relatives requested. Do not write their names.
4. If you have any questions, please call your donor coordinator.

Last name: _____ First name: _____ Middle Initial: _____

Sex: Male _____ Female _____ Age: _____

Date of Birth: ____/____/____ Place of Birth:_____

Soc. Security #: _____-_____-_____ Are you a US citizen or permanent resident? ☐ Yes ☐ No

Driver's License #:_____ State:_____

Marital Status: ____single ____married ____ divorced ____ widowed _____engaged _____partnered

Length of Current Relationship: _____ years

DEMOGRAPHICS

MAILING ADDRESS:

Street: _____City: _____

State/Province: _____ Zip/ Postal code: _____ Country: _____

OK to leave message?

Home Phone Number: ( ) _____- _____ ☐ Yes ☐ No

Work Phone Number: ( ) _____- _____ ☐ Yes ☐ No

Cell Phone Number: ( ) _____- _____ ☐ Yes ☐ No

Email Address: _____

Do you have medical insurance? ____Yes ____No

If yes, name of carrier: _____ ID #:_____ Group #_____

Employer: _____

DONATION HISTORY:

Have you applied or been screened to be an egg or sperm donor before? ____Yes ____No

If yes, list name and location of donor program (s): _____

_____

Have you donated before? ____Yes ____No If yes, how many times did you donate or cycle? ____

Are you currently enrolled as an egg or sperm donor in another program? ____Yes ____No

How did you hear about our program?

☐ Radio (which station)_____ ☐ Friend (name)_____
☐ Newspaper (which one) _____ ☐ Magazine (which one)_____
☐ Website (which one) _____ ☐Other (specify)_____

Did you consult with your family when completing your family medical history? _____Yes _____No

I hereby attest that all information disclosed in this application is accurate, true, and up-to-date to the best of my knowledge. _____

(Signature of Applicant)

FORM TITLE: Donor Application Form	**REVISION: 3/4/09**
FORM NUMBER:	**EFFECTIVITY DATE:**

PERSONAL HEALTH HISTORY

Are you currently under a physicians care for any reason? _____Yes _____No

If yes, please explain: _____

Have you ever had any major illnesses such as amoebic dysentery (infection of the intestine), hypertension, blood clots, pneumonia, mononucleosis, etc.? ____Yes ____No

If yes, when? _____

Have you had any serious illness in the past? _____ Yes _____ No
If yes, please describe: _____

Did you have any complications or concerns with anesthesia? _____

Have you had any hospitalization(s) not mentioned above? _____

_____

Please list any surgical procedures:

_____
_____
_____
_____

Have you ever had any broken bones? _____Yes _____ No If yes, please list: _____

How many days in the preceding 12 months did you miss work because of illness (colds, flu, accidents, surgery, etc.)?
Please explain:_____

Has anyone in your family, including yourself, experienced recurring and/or chronic physical symptoms that have not been evaluated by a physician (Please include those symptoms that you may not consider serious.)? _____Yes _____No
If yes, please describe:_____.

Have you ever been seen by psychiatrist, psychologist, social worker, counselor, or any other mental health professional for any reason? ____Yes _____No

If yes, when, for how long and for what reason? _____

Have you ever used medications such as antianxiety or antidepressants to treat an emotional or psychological problem? ____Yes ____No

If yes, list why and date last used _____

Have you been vaccinated in the last 6 months? _____Yes _____No

If yes, what were you vaccinated for? _____

List all medications that you have taken in the proceeding 12 months (prescription):

Medication	How Often	Reason
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

PERSONAL HEALTH HISTORY (continued)

List all current over-the-counter medications (include hormones, vitamins, aspirin, antacids, laxatives, herbal & sports supplements, performance-enhancing supplements including steroids, etc.)

Medication	How Often	Reason
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Have you ever taken anti-malarial drugs or had malaria? _____Yes _____No

Have you had a blood transfusion? _____Yes _____No If yes, when? _____

Have you ever been refused or denied as a blood donor? _____Yes _____No If yes, why? _____

Are you eligible to work in the United States? _____Yes ____No Is your work schedule flexible? ____Yes ____No

List all the jobs you held in the past five years:

Jobs/Duties	Year Began	Year End

Have you had radiation exposure or x-ray exposure? _____Yes _____No
If yes, please explain: _____

Have you ever been exposed to ñagent orangeò or any other herbicides or chemicals (military, forestry, highway service, or elsewhere)? _____Yes _____No

If yes, which substance(s)? _____

When? _____ Where? _____

In the preceding six months, were you exposed to the following in your job, living environment or while involved in hobbies? If yes to any of these, give dates and how often you have been exposed. Please consider carefully.

Exposed to:	Response		When?	How Often?
Toxic Chemicals or Substances	Yes	No		
Sprays	Yes	No		
Fumes/Exhaust	Yes	No		
Radiation	Yes	No		
Flea Powder/Sprays	Yes	No		
Lead/Lead products	Yes	No		
Asbestos/Asbestos products	Yes	No		
Pesticides/Herbicides	Yes	No		
Cleaning solutions/solvents	Yes	No		

PERSONAL HEALTH HISTORY (continued)

Do you take hot baths, saunas, hot tubs, or steam baths? _____Daily _____Weekly _____Occasionally _____Never

Within the past 6 months have you been exposed to UV rays in a tanning booth? _____ Yes _____ No

What is your caffeine usage? Number cups of coffee: _____ Soda _____ Tea _____ Energy Drinks _____

Do you currently smoke cigarettes? Daily Occasionally Rarely Never If yes, how many per day? _____

Have you ever smoked cigarettes? ____Yes ____No
If yes, how many cigarettes per day? _____
If no, what year/month did you stop? _____
How many years did you smoke? _____

What best describes your alcohol consumption? ____Never drink
____ Rarely drink/Drink in small amounts ____Even amounts through the week ____Drink in concentrated periods

What type of alcohol do you usually consume? _____Beer _____ Wine _____Liquor

If you do drink, how many drinks do you usually consume in a week? ____1-3 ____4-9 ____10-15 ____16 or more

Have you ever used recreational or illicit drugs (cocaine, marijuana, LSD, heroin, barbiturates, narcotics, opiates, amphetamines, hallucinogens, tranquilizers, PCP, steroids, or etc.)? _____ Yes _____ No
If yes, which one (s) and when did you last use them? _____

Do you sleep well? _____Yes _____ No If no, how do you manage this?_____

Have you had acupuncture, ear and/or body piercing or tattooing in which sterile procedures may not have been used?
____Yes _____No

Please list and describe all of your tattoos and body piercings:

Date Received:	Description:	Location on Body:	Sterile Needles Used?

Have you ever had any problems with the law (i.e. DUI, custody issues, lawsuits)? _____Yes _____No

If yes, please explain _____

Please list any arrests, convictions, sentences, etc.: _____

_____

Have you ever been incarcerated? If yes, please describe:

_____

SEXUAL AND CONTRACEPTIVE HISTORY

Sexual Orientation (please circle): Homosexual Heterosexual Bisexual

Number of current sexual partners: _____Number of sexual partners during the last six months: _____

Total number of past sexual partners: _____

In the last 6 months have you had unprotected sex (intercourse without a condom) with a new partner? ___Yes ___No

Have you ever injected drugs or had a sexual partner who did so? ____Yes ____No

CONTRACEPTIVE HISTORY:

Currently use: IUD Type _____ Diaphragm _____ Condom _____ Birth Control Pills _____

Rhythm _____ Spermicide _____ Depo-Provera _____ Tubal Ligation _____ None _____

If Birth Control Pills: _____ (name) How long on Birth Control Pills? _____

Why did you start taking Birth Control Pills? _____

If Depo-Provera, when was your last injection? _____

To your knowledge, have you or any of your sexual partners been in contact with anyone or have you been personally tested or been treated for any of the following:

	Self	Partner	If yes, when:	How many times?	When was the last time?
HIV (AIDS)					
NSU (non specific urethritis)					
Syphilis					
Gonorrhea					
Chlamydia					
Trichomonas					
Venereal Warts					
Herpes, Genital					
Viral Hepatitis B or C					
Genital Sores					
Penis Discharge					
Other sexually transmissible diseases					

MENSTRUAL AND REPRODUCTIVE HISTORY: FOR EGG DONORS

Age at onset of menses: _____ Date of Last Menstrual Period: _____

Are your menstrual periods regular: _____Yes _____No

How long is your monthly cycle (first day of one period to first day of the next)? _____days

Are you periods regular when you are not on any type of hormonal birth control such as the pill, etc.? ____Yes ____ No

If no, how many times per year do you menstruate? _____

How many days does your period usually last? _____ days

Do you bleed or spot between periods? _____Yes _____No

Do you get menstrual cramps before, during, or after your period? ____Yes ____No
If yes, are your cramps: mild moderate severe?

If yes, do you use medication alleviate the pain? _____Yes _____No
If yes, what medications do you use? _____

Have you ever had any medical treatment for menstrual problems? _____

Date of last Pap Smear: _____ Result: _____

Have you ever had an abnormal PAP: _____ If yes, when & why: _____

Have you ever been told you were infertile: _____ If yes, when & why:_____

Have you ever had a pelvic infection requiring treatment with antibiotics ____Yes ____No

Do you want children in the future? ____Yes ____No

REPRODUCTIVE HISTORY (or partner for sperm donors)

FERTILITY HISTORY:

Number of pregnancies: _____
Number of miscarriages:_____ Date(s) of miscarriages: _____
Number of ectopic pregnancies: _____ Date(s) of ectopic pregnancy: _____
Number of abortions: _____ Date(s) of abortions_____
Number of stillbirths: _____ Date(s) of each stillbirth: _____
Number of children: _____ Are you Currently Breastfeeding? ____Yes ____No
Length of time it took you or your partner to get pregnant. Shortest _____ Longest _____

Pregnancy # Boy/Girl	Delivery Date	Type of Delivery (Vaginal or C-Section)	Complications	Weeks pregnant when delivered (prematurity)	Height / Weight
1					
2.					
3.					
4.					

PHYSICAL CHARACTERISTICS

Are you adopted? ____Yes ____No Blood Type if known: _____DOB_____

Height: _____ Weight: _____

Recent weight loss/gain?____Yes ____No If yes _____lbs loss/gain (circle one)

What was your weight at age 21? _____

Please circle responses that best describe you below:

Right Handed Left Handed Ambidextrous

Bone Structure: Small Medium Large Very Large

Complexion: Very Fair Fair Light Medium Olive Light Brown Dark Brown Ebony

Tan ability: None Slight Medium Easy Freckle

Skin Condition: Oily Medium Dry Combination **Dimples?** ____Yes ____No

Eye Color: Blue Brown Lt. Brown Dark Brown Green Hazel

Eye set: Narrow Average Wide **Eye Size:** Small Average Large **Shape:** Round Oval Almond

Natural Hair Color: Black Light Blonde Medium Blonde Dark Blonde Light Brown Medium Brown Dark Brown Red

Hair Type: Curly Wavy Straight **Hair Texture:** Fine Medium Coarse **Fullness:** Thin Medium Thick

Baldness: ____ Yes ____No **Baldness in Family:** ____ Yes ____ No

Premature Graying: ____Yes ____No If yes, at what age____

Body and Facial Features: Small Medium Large

Condition of your teeth: Poor Fair Good Excellent

Have you had any periodontal or orthodontic work? ____Yes ____No If yes, at what age? _____

Hearing (without corrective aids): Poor Fair Good Excellent

Vision (without corrective lenses): Poor Fair Good Excellent Prescription (If known): _____

PERSONAL HEALTH HISTORY

Do you wear glasses or contacts or have you had laser surgery? _____Yes _____No

If yes, are/were you: _____Nearsighted _____Farsighted ____Other (specify):_____

Do you have astigmatism (blurred vision due to an irregularity in the curvature of the cornea.? ____Yes ____No
If yes, age diagnosed _____.

Do you have any Allergies? _____Yes _____No

If yes, are they to: ____Food(s)_____Medication(s) _____Environmental _____Latex

Please list any childhood allergies that you have outgrown: _____

For each medication allergy, describe specific substance and reaction(s) and age first noticed:

Substance: _____ Reaction(s):_____ Age: _____

Substance: _____ Reaction(s):_____ Age: _____

Substance: _____ Reaction(s):_____ Age: _____

SOCIAL HISTORY AND HABITS

Religion Born Into: _____ Religion Practiced:_____

Grade Point Average (GPA): _____ SAT Scores: Verbal _____ Math _____ ACT Score: _____

Education:
_____ Did not Complete High School
_____ Received GED
_____ Completed high school
_____ Currently in college, pursuing degree in _____
_____ Completed college, degree in _____ GPA:_____
_____ Currently pursuing an advanced degree in _____
_____ Completed advanced degree in _____

Did you have any learning disabilities or weaknesses in school? If yes, describe: _____

Academic Strengths (i.e. math, reading):_____

How many languages do you speak? _____Which one (s): _____

Musical Talent or Instrument: _____Years Experience_____

SOCIAL HISTORY AND HABITS (continued)

Artistic Talent: _____

Athletic Skills / Favorite Sports: _____

Other skills/hobbies/talents/interests do you have (i.e. writing, reading, ability to do games or crossword puzzles, handcrafts)? Describe: _____

Current Occupation: _____ How long have you been at your current job? _____

HABITS:

Exercise Habits: _____None _____Occasional _____Regular Type of Exercise: _____

Your diet is: ____Vegetarian ____Non-vegetarian Your diet is: poor average excellent

Do you have any dietary restrictions? _____

REPRODUCTIVE HISTORY

YOUR CHILDREN	1	2	3	4
Age				
Sex				
Eye color				
Hair Color				
Frame size				
Grade in school				
Personality				
Artistic ability				
Intelligence				
Distinguishing characteristics				
Wears eye glasses				
Discipline problems				
Any medication				
Dyslexia				
Reading difficulties				
Speech difficulties				
Any special services at school				
Seen by Social worker/ psychiatrist				
Grade functional level:				
Normal / Above/ Below Average				

FAMILY HEALTH HISTORY

How many blood siblings are in your immediate family (including yourself and half siblings)? _____

Number of Brothers _____ Number of Sisters _____

Number of Maternal Aunts _____ Number of Maternal Uncles _____

Number of Paternal Aunts _____ Number of Paternal Uncles _____

Do you have any brothers or sisters that died in infancy or childhood? _____Yes _____No

If yes, what was the cause? _____

Are there any members of your family with a history of learning disabilities or autism? _____Yes _____No

If yes, please explain _____

FAMILY HEALTH HISTORY (continued)

Describe genetic family members according to the following characteristics. Use natural eye and hair color; fair/dark, etc. complexion. If they are deceased, please list cause of death. Please do not put ñnaturalò as a cause of death. If unknown, write ñunknown.ò

	Eye Color	Hair Color	Complexion	Height	Weight	Bone Structure	Occupation/ Education	Age if living	Age at time of death	Cause of death
Sister(s)										
Brother(s)										
Mother										
Father										
Maternal Grandmother										
Materanl Grandfather										
Paternal Grandmother										
Paternal Grandfather										

FAMILY HEALTH HISTORY (continued)

Carefully review the following list of medical problems and identify which ones you or one of your genetic relatives have or had. Please consider each condition carefully for each family member. Explain any conditions you check below, indicating which side of the family (maternal or paternal), the age at the time of onset, and any other pertinent information. If you and none of your indicated family members have a history of the specific medical condition, please indicate none.

***PLEASE REFER TO THE GLOSSARY ON THE LAST PAGES OF THIS FORM FOR DEFINITIONS**

	None	Self	Mother	Father	Sibling	Grand-parents	Aunt/ Uncle	Cousin	Explanation (which side of family, age of onset, etc.)
CANCER									
Breast									
Colon or Intestinal									
Lung									
Ovarian or Uterine									
Prostate or Testicular									
Skin									
Stomach									
Thyroid									
Blood (e.g. leukemia)									
Other									
HEART									
Stroke									
Heart Attack									
Congenital Heart Disease									
Heart Disease or Defect									
Hardening of the Arteries									
High Blood Pressure									
High cholesterol level									

FAMILY HEALTH HISTORY (continued)

	None	Self	Mother	Father	Sibling	Grand-parents	Aunt/ Uncle	Cousin	Explanation (which side of family, age of onset, etc.)
BLOOD									
Anemia									
Sickle-Cell Anemia									
Factor V Leiden thrombpphilia (Blood clots or strokes)									
Hemophilia or other Bleeding/Clotting Disorders such as Von Willebrandôs Disease									
Immune Deficiency									
Leukemia									
Lymphoma or Swollen Lymph Nodes									
HIV									
Thalassemia									
Polyarteritis Nodosa									
Other Blood Disorder									
RESPIRATORY									
Asthma									
Hay Fever									
Emphysema									
Tuberculosis									
Pneumonia									
Alpha-1 antitrypsin Disorder									
Blood in Sputum									
Other Lung Disease									

FAMILY HEALTH HISTORY (continued)

	None	Self	Mother	Father	Sibling	Grand-parents	Aunt/ Uncle	Cousin	Explanation (which side of family, age of onset, etc.)
GASTRO-INTESTINAL									
Appendicitis									
Ulcer of Stomach or Duodenum									
Gallstones									
Hepatitis A,B or C									
Cirrhosis of the Liver									
Other Liver Disease									
Ulcerative Colitis									
Crohns Disease									
Pyloric Stenosis									
Multiple Polyps of the Colon									
Rectal Disorder									
Inflammatory Bowel Disease									
Any other problem of the digestive system									
METABOLIC/ ENDOCRINE									
Diabetes requiring insulin therapy									
Diabetes not requiring insulin therapy									
Childhood Diabetes									
Thyroid disorder									
Goiter									
Hypoglycemia									
Adrenal Dysfunction or Disorder									
Phenyl Ketonuria (PKU) or inherited Metabolism Disorder									
Obesity									
Dwarfism									

FAMILY HEALTH HISTORY (continued)

	None	Self	Mother	Father	Sibling	Grand-parents	Aunt/ Uncle	Cousin	Explanation (which side of family, age of onset, etc.)
URINARY									
Kidney Problems									
Polycystic Kidney Disease									
Other disease/ defect of urinary tract (urethra, bladder, ureter)									
GENITAL/ REPRODUCTIVE									
Hermaphroditism/ Ambiguous Genitals									
Hypospadias or undescended testicle									
Uterine Fibroids									
Ovarian Cysts or Ruptured									
Lumps or Cysts in Breast or Discharge									
Polycystic Ovarian Syndrome (PCOS)									
Pelvic Inflammatory Disease (PID)									
Endometriosis									
REPRODUCTIVE OUTCOMES									
2 or more Miscarriages									
Stillborn									
Premature Menopause									
Death of a newborn infant									
Childhood death									
Birth defects									
Infertility									
Premature Birth									

FAMILY HEALTH HISTORY (continued)

	None	Self	Mother	Father	Sibling	Grand-parents	Aunt/ Uncle	Cousin	Explanation (which side of family, age of onset, etc.)
NEUROLOGICAL									
Migraines									
Mental retardation									
Senility or Mental Deterioration before age 50									
Multiple Sclerosis									
Cerebral Palsy									
Neurofibromatosis									
Epilepsy / Seizures									
Attention Deficit Disorder/ Hyperactivity									
Autism / Aspergerôs									
Alzheimerôs Disease/Dementia									
Hydrocephalus									
Tuberous Sclerosis									
Parkinsonôs Disease									
Creutzfeldt-Jakob Disease									
Scoliosis									
Myasthenia Gravis									
Huntingtonôs or Wilsonôs Disease									
Tourretteôs syndrome									
Other diseases of the nervous system									
MENTAL HEALTH									
Anxiety / Panic Attacks									
Anorexia / Bulemia/other eating disorders									

FAMILY HEALTH HISTORY (continued)

	None	Self	Mother	Father	Sibling	Grand-parents	Aunt/ Uncle	Cousin	Explanation (which side of family, age of onset, etc.)
Depression									
Schizophrenia									
Manic Depressive or Bipolar Disorder									
Other mental health disorder requiring hospitalization									
Suicide Attempts									
Other mental health problems that warranted counseling (please list)									
MUSCLE/BONE/ JOINTS									
Muscular Dystrophy									
Achondroplasia ï form of dwarfism with abnormal bone growth									
Other Chronic Muscle Disease									
Osteogenesis imperfecta (brittle bone disease)									
Loss of Muscle Coordination									
Osteoporosis									
Marfan Syndrome									
Arthritis									
Rheumatoid or Juvenile Arthritis									
Spinal Muscular Atrophy									
Hereditary Low Back Disorder or Deformity of Spine									
Reiterôs Disease									
Myasthenia Gravis									
Gout									

FAMILY HEALTH HISTORY (continued)

	None	Self	Mother	Father	Sibling	Grand-parents	Aunt/ Uncle	Cousin	Explanation (which side of family, age of onset, etc.)
Metabolic Bone Disease (be more specific)									
Lupus (systemic lupus erythematosis ï SLE)									
SIGHT/SOUND/ SMELL									
Deafness before age 60									
Deformity of the ear									
Cataracts before age 50									
Blindness									
Color Blindness									
Severe Myopia									
Glaucoma									
Retinoblastoma									
Retinitis Pigmentosa									
Deviated Septum									
Any other Sensory Disorder									
SKIN									
Acne									
Albinism									
Eczema									
Excessive Facial Hair (Hirsutism)									
Pigmentation Disorders									
Psoriasis									
Neurofibromatosis									

FAMILY HEALTH HISTORY (continued)

	None	Self	Mother	Father	Sibling	Grand-parents	Aunt/ Uncle	Cousin	Explanation (which side of family, age of onset, etc.)
Other disorders of the skin									
Infectious Skin Disease									
More than 5 purple- or coffee- colored spots on skin (size of quarter or larger)									
CONGENITAL ABNORMALITIES/ BIRTH DEFECTS									
Cleft Lip / Palate									
Congenital Hip Problems									
Club Feet									
Heart Defect									
Hearing Problems									
Spina Bifida -Neural Tube (open spine)									
Microcephaly									
Holoprosencehpaly ï a single-lobed brain structure and severe skull and facial defects									
Other									
CHROMOSOMAL ABNORMALITIES									
Down Syndrome									
Other (i.e. Turner, Fragile X, Klinefelterôs etc.)									
OTHER									
Alcoholism									
Drug abuse, Misuse or Addiction									
Premature degeneration of any organ system									
Any other condition not mentioned above									

More information about the above medical conditions are located at: http://www.mazornet.com/genetics/index.htm

Explain: _____

_____

_____

GENETIC HISTORY

Ethnic origin (e.g., French, Irish)

Mother: _____ Father: _____

Race: Check all that apply for your ancestors:

African American	___Mother___Father___MGM___MGF___PGM___PGF
Eastern European (Ashkenazi) Jewish	___Mother___Father___MGM___MGF___PGM___PGF
Mediterranean (Greek, Italian)	___Mother___Father___MGM___MGF___PGM___PGF
Hispanic	___Mother___Father___MGM___MGF___PGM___PGF
Indian (from India)	___Mother___Father___MGM___MGF___PGM___PGF
Southeast Asian (Laotian, Vietnamese, Cambodian)	___Mother___Father___MGM___MGF___PGM___PGF
French Canadian	___Mother___Father___MGM___MGF___PGM___PGF
Cajun	___Mother___Father___MGM___MGF___PGM___PGF

(**MGM**=Maternal Grandmother, **MGF**=Maternal Grandfather; **PGM**=Paternal Grandmother, **PGF**=Paternal Grandfather)

Have you or anyone in your family ever been tested positive as a carrier or had any of any of the following diseases?

Blooms Syndrome	No	If yes:	_____ disease	_____carrier	_____negative	_____unknown
Canavan	No	If yes:	_____ disease	_____carrier	_____negative	_____unknown
Cystic Fibrosis	No	If yes:	_____ disease	_____carrier	_____negative	_____unknown
Fabry Disease	No	If yes:	_____ disease	_____carrier	_____negative	_____unknown
Familial Dysautonomia	No	If yes:	_____ disease	_____carrier	_____negative	_____unknown
Familial Mediterranean Fever	No	If yes:	_____ disease	_____carrier	_____negative	_____unknown
Fanconi Anemia Grp. C:	No	If yes:	_____ disease	_____carrier	_____negative	_____unknown
Gaucher	No	If yes:	_____ disease	_____carrier	_____negative	_____unknown
Niemann-Pick type A	No	If yes:	_____ disease	_____carrier	_____negative	_____unknown
Mucolipidosis type IV	No	If yes:	_____ disease	_____carrier	_____negative	_____unknown
Sickle Cell	No	If yes:	_____ disease	_____carrier	_____negative	_____unknown
Tay-Sachs	No	If yes:	_____ disease	_____carrier	_____negative	_____unknown
Thalassemia	No	If yes:	_____ disease	_____carrier	_____negative	_____unknown

Is there anything else we should know about your family?

_____

_____

_____

PERSONAL AND MOTIVATIONAL

In your own words, describe your personality, temperament, and character:_____

What physical, artistic, intellectual or social abilities do you feel best about:

What are your present and future career goals:_____

What are your present and future personal goals: _____

List the 3 achievements you are most proud of:

PERSONAL AND MOTIVATIONAL (continued)

What is your favorite movie? _____

What is your favorite book? _____

What is your favorite color? _____

What is your favorite food? _____

What is one of your most memorable moments and why?

If you could change one thing about yourself, what would it be and why?

Is there a person alive or dead whom you admire and why?

What would you do on a ñperfectòday if you could do anything you wanted?

Describe your personality and temperament as a child:

What was your favorite thing to do as a child?

PERSONAL AND MOTIVATIONAL (continued)

What did your parents teach you to value?

How were you in comparison to other children?

Describe your personality and temperament as a teenager:

Did you have any problems as a child and/ or as a teenager? Explain:

Who was the most important influence on you and why?

What were your ambitions/ goals as a teenager?

What were your best and worst subjects in school?

PERSONAL AND MOTIVATIONAL (continued)

Please provide the following information about your family:

	Intellectual/Academic Achievements	Artistic Achievements
Mother		
Father		
Sisters		
Brothers		

Reasons for wanting to donate eggs or sperm : _____

If you could pass on a message to the recipient(s) of your eggs or sperm, what would that message be?

If you could write a message to the child born through your participation as an egg or sperm donor for when he/she turns 18 years old, what would you tell him/her?

Please attach several current photographs of yourself.
(Childhood pictures will be requested at a later date)

GLOSSARY- INHERITED DISEASES

DEFINITIONS

Inherited – A disease or characteristic that is transmitted through genes from parents to offspring. Inheritance patterns include the following:

Autosomal Dominant ï Disorders caused by one mutated copy of a gene. An affected person usually has one affected parent. Autosomal dominant disorders usually occur in every generation of an affected family. When a person carries an autosomal dominant gene mutation, each of his/her offspring has a 50% chance for inheriting the gene mutation.

Autosomal Recessive ï Disorders caused by two mutated copies of a gene. An affected person usually has unaffected parents who each carry one copy of the mutated gene. Autosomal recessive disorders are not usually seen in every generation of a family. Carrier parents have a 25% chance for having an affected child.

X-linked dominant ï Disorders caused by mutations in genes located on the X chromosome. Females are more frequently affected than males, and the chance to pass on an X-linked dominant disorder differs between men and women. Fathers cannot pass the X-linked traits or disorders to their sons. Females who have an X-linked dominant gene mutation have a 50% chance to have an affected child.

X-linked recessive ï Disorders caused by mutations on genes on the X chromosomes. Males are more often affected than females, and the chance to pass on the disorder differs between men and women. Families with X-linked recessive disorders often have affected males, but rarely affected females, in each generation. Females who carry an X-linked recessive gene mutation have a 50% chance to pass it on to each of her children.

Multifactorial ï Disorders caused by a combination of the effects of multiple genes or by interactions between genes and the environment.

Sources and additional information:

Talking Glossary of Genetic Terms http://www.genome.gov/10002096; http://www.genome.gov/glossary.cfm#g

Fact Sheets http://www.genome.gov/10000202

Cancer Dictionary http://www.cancer.gov/dictionary/

Genetics Home Reference National Library of Medicine http://ghr.nlm.nih.gov/

National Institutes of Health Genetic and Rare Diseases Information Center

http://rarediseases.info.nih.gov/GARD/Default.aspx?PageID=4

Gene Tests http://www.genetests.org/

GLOSSARY- INHERITED DISEASES (continued)

Cancer

- **Hereditary Breast/Ovarian Cancer** ï Mutations in *BRCA1* or *BRCA2* genes predispose to breast cancer and ovarian cancer as well as prostate cancer *(BRCA1)* and other cancers *(BRCA2)*. Hereditary breast/ovarian cancer is inherited in families in an autosomal dominant pattern. Each child of an individual with a *BRCA1* or *BRCA2* cancer-predisposing mutation has a 50% chance of inheriting the mutation.
- **Hereditary colon cancer**
  - **Hereditary non-polyposis colorectal cancer** - Hereditary non-polyposis colon cancer (HNPCC) is caused by an autosomal dominant inherited gene mutation. HNPCC is characterized by an increased risk of colon cancer and other cancers (e.g., of the endometrium, ovary, stomach, small intestine, hepatobiliary tract, upper urinary tract, brain, skin). Each child of an individual with a HNPCC cancer-predisposing mutation has a 50% chance of inheriting the mutation.

Heart

- **Congenital heart disease** - Congenital heart disease is a common type of birth defect or malformation in one or more structures of the heart or blood vessels that occurs during pregnancy while the fetus is developing. The cause of congenital heart disease is not known in most affected people. There are some recognized factors that are associated with an increased risk for congenital heart disease including: 1) genetic or chromosomal abnormalities such as Down syndrome; 2) taking certain medications, alcohol or drug abuse during pregnancy; and 3) maternal viral infections such as German measles in the first trimester of pregnancy. The risk of having a child with congenital heart disease is higher if a parent or a sibling has a congenital heart defect.

Blood

- **Sickle cell anemia -** Sickle cell disease is a group of disorders that affects hemoglobin, the molecule in red blood cells that delivers oxygen to cells throughout the body. Individuals who have sickle cell disease have atypical hemoglobin molecules called hemoglobin S, which can distort red blood cells into a sickle, or crescent, shape. Signs and symptoms include a low number of red blood cells (anemia), repeated infections, and periodic episodes of pain. The severity of symptoms varies from person to person. Sickle cell anemia is inherited in an autosomal recessive manner. Each child of carrier parents has a 25% chance to be born with sickle cell anemia.
- **Factor V Leiden thrombophilia -** Factor V Leiden thrombophilia is an inherited disorder of blood clotting. Factor V Leiden is the name of a specific mutation that results in thrombophilia - the increased tendency to form abnormal blood clots in blood vessels. People who have the factor V Leiden mutation are at somewhat higher than average risk for a type of clot that forms in veins, such as the deep veins of the legs (deep venous thrombosis), or a clot that travels through the bloodstream and lodges in the lungs (pulmonary embolism). Factor V Leiden thrombophilia can be inherited in families in an autosomal dominant and autosomal recessive manner.
- **Hemophilia -** Hemophilia is a bleeding disorder that slows the blood clotting process. People who have hemophilia often experience prolonged bleeding or oozing following an injury, surgery, or having a tooth pulled. The major types of this condition are hemophilia A (also known as classic hemophilia) and hemophilia B (also known as Christmas disease). Hemophilia A and hemophilia B are inherited in an X-linked recessive manner. In X-linked recessive inheritance, a female with one altered copy of the gene in each cell is called a carrier. She can pass on the altered gene to her children, but usually does not experience signs and symptoms of the disorder
- **Tay-Sachs -** Tay-Sachs disease is a rare inherited disorder that causes progressive destruction of nerve cells in central nervous system (the brain and spinal cord). Affected infants progressively lose motor skills such as turning over, sitting, and crawling. Children who have the severe infantile form of Tay-Sachs disease usually survive only into early childhood. Tay-Sachs disease is inherited in an autosomal recessive manner. Carrier parents have a 25% in each pregnancy to have an affected child.

GLOSSARY- INHERITED DISEASES (continued)

- **Thalassemia -** Beta thalassemia is an inherited blood disorder that reduces the production of hemoglobin. Symptoms of beta thalassemia occur when not enough oxygen gets to various parts of the body due to low levels of hemoglobin and a shortage of red blood cells. Beta thalassemia is inherited in an autosomal recessive manner. Carrier parents have a 25% chance in each pregnancy to have an affected child.

Respiratory

- **Alpha-1 antitrypsin disorder -** Alpha-1 antitrypsin deficiency is an inherited condition that can cause lung disease in adults and liver disease in adults and children. This disorder is inherited in an autosomal co-dominant pattern. Co-dominance means that two different versions of the gene may be expressed, and both versions contribute to the genetic trait.

Gastrointestinal

- **Cystic Fibrosis -** Cystic fibrosis is an inherited disorder of the mucus glands that affects many body systems. The most common signs and symptoms of cystic fibrosis include progressive damage to the respiratory system and chronic digestive system problems. Cystic fibrosis is inherited in an autosomal recessive manner. Carrier parents have a 25% chance in each pregnancy for having an affected child.
- **Pyloric stenosis -** Pyloric stenosis (also called infantile pyloric stenosis or gastric outlet obstruction) is a condition that involves a narrowing of the pylorus, the lower part of the stomach through which food and other stomach contents pass to enter the small intestine. When an infant has pyloric stenosis, the muscles in the pylorus become enlarged to the point where food is prevented from emptying out of the stomach. Pyloric stenosis is known to run in families. When a parent has pyloric stenosis, then, their infant has an increased risk of developing the disorder.

Metabolic/Endocrine

- **Phenylketonuria -** Phenylketonuria (also known as PKU) is an inherited disorder that increases the levels of a substance called phenylalanine in the blood. Phenylalanine is a building block of proteins that is obtained through the diet. If PKU is not treated, phenylalanine can build up to harmful levels in the body, causing mental retardation and other serious health problems. PKU is inherited in an autosomal recessive manner. Carrier parents have a 25% chance with each pregnancy to have an affected child.
- **Dwarfism** ï There are a number of different types of dwarfism and many are inherited in families. Examples of types of dwarfism include: achondroplasia, thanatophoric dysplasia, and Robinow syndrome.

Urinary

- **Polycystic kidney disease -** Polycystic kidney disease is a disorder that affects the kidneys and other organs. Cysts, develop in the kidneys, causing them to become enlarged and can lead to kidney failure. Cysts may also develop in other organs, particularly the liver. There are two major forms of polycystic kidney disease distinguished by the age of onset and their pattern of inheritance. The autosomal dominant form (sometimes called ADPKD) has signs and symptoms that typically begin in adulthood, although cysts in the kidney are often present from childhood. The autosomal recessive form of polycystic kidney disease (sometimes called ARPKD) is much rarer and is often lethal early in life.

GLOSSARY- INHERITED DISEASES (continued)

Genital/Reproductive

- **Hypospadias –** Hypospadias is a birth defect of the urethra that happens in males. It involves an abnormally placed opening in the penis. Instead of opening at the tip of the penis, a hypospadic urethra opens anywhere along the line running from the tip along the underside of the shaft to the where the penis and scrotum meet. In most males hypospadias is not inherited, nor is their family recurrence. In some cases, hypospadias happens as a result of a chromosomal abnormality called a pericentric inversion of chromosome number 16.

Reproductive Outcomes

- **2 or more miscarriages –** Miscarriage (also called spontaneous abortion) is the term used for a pregnancy that ends on it's own, within the first 20 weeks of gestation. The causes of miscarriages are varied, and most often the cause cannot be identified. During the first trimester, the most common cause of miscarriage is chromosomal abnormality - meaning that something is not correct with the baby's chromosomes. In some cases the chromosome abnormality in the developing fetus is the result of a parent carrying a balanced chromosomal arrangement called a translocation. This can lead to multiple miscarriages.
- **Birth defects –** A birth defect is a problem that happens while the baby is developing in the mother's body. Most birth defects happen during the first 3 months of pregnancy. A birth defect can affect almost any part of the body. Causes of birth defects include a family history of birth defects, maternal age, certain drugs taken during pregnancy, alcohol use and smoking during pregnancy.

Neurological

- **Mental Retardation -** Mental retardation is a term used to describe a person who has certain limitations in mental functioning and difficulties in communicating, taking care of him or herself, and social skills. These limitations will cause a child to learn and develop more slowly than a typical child. Causes of mental retardation include genetic conditions such as Down syndrome, problems during pregnancy, problems at birth and health problems such as malnutrition.
- **Cerebral palsy -** Cerebral palsy is the term for a group of disorders that involve the loss of movement or loss of other nerve function. Cerebral palsy is caused by injuries to the largest part of the brain (cerebrum) which happen as the baby grows in the womb or near the time of birth. There are multiple causes of cerebral palsy including birth defects that affect the brain, spinal cord, head, face, lungs or metabolism, and certain hereditary and genetic conditions.
- **Neurofibromatosis –** There are two types of neurofibromatosis. Neurofibromatosis type 1 is a disorder characterized by changes in skin coloring (pigmentation) and the growth of tumors along nerves in the skin, brain, and other parts of the body. The signs and symptoms of this condition vary widely among affected people. Neurofibromatosis type 1 is considered to have an autosomal dominant pattern of inheritance. Neurofibromatosis type 2 is a disorder characterized by the growth of noncancerous tumors in the nervous system. Neurofibromatosis type 2 is also considered to have an autosomal dominant pattern of inheritance. However, unlike most other autosomal dominant conditions, in which one altered copy of a gene in each cell is sufficient to cause the disorder, two copies of the NF2 gene must be altered to trigger tumor formation in neurofibromatosis type 2. A mutation in the second copy of the NF2 gene happens in other cells in the nervous system during a person's lifetime. Almost everyone who is born with one NF2 mutation acquires a second mutation in many cells and develops the tumors characteristic of neurofibromatosis type 2.

GLOSSARY- INHERITED DISEASES (continued)

- **Autism/Aspergers –**
  - Autism and autism spectrum disorders are complex neurodevelopmental conditions. The genetics of autism are complex and it is thought that there are multiple genes involved.
  - Aspergers ï Asperger syndrome is one of several autism spectrum disorders, with symptoms of difficulty in social interactions and restricted, stereotyped interests and activities. Children who have Aspergers syndrome do not usually have language or cognitive developmental delays. Genes are believed to play a role in Aspergers syndrome, and it seems to run in some families.

- **Hydrocephalus –** Hydrocephalus is a condition in which the primary characteristic is excessive accumulation of fluid in the brain. The excessive accumulation of fluid causes an abnormal widening of spaces in the brain called ventricles. This widening creates potentially harmful pressure on the tissues of the brain. The causes of hydrocephalus are still not well understood. Hydrocephalus may be caused by inherited genetic abnormalities (such as the genetic defect that causes aqueductal stenosis) or developmental disorders (such as those associated with neural tube defects including spina bifida and encephalocele). Other possible causes include complications of premature birth, and diseases such as tumors or hemorrhage which block the fluid.
- **Tuberous sclerosis -** Tuberous sclerosis is a genetic disorder characterized by the growth of numerous noncancerous tumors in many parts of the body. These tumors can occur in the skin, brain, kidneys, and other organs, in some cases leading to significant medical problems. Tuberous sclerosis is inherited in an autosomal dominant manner, which means one copy of the altered gene in each cell is sufficient to cause the disorder. In about one-third of families, an affected person inherits an altered gene from a parent who has the disorder. About two thirds of cases result from new gene mutations. These cases occur in people with no history of tuberous sclerosis in their family.
- **Creutzfeldt-Jakob Disease –** Creutzfeldt-Jakob disease is a prion disease. Prion diseases are group of progressive conditions that affect the nervous system. Prion diseases impair brain function, causing memory changes, personality changes, a decline in intellectual function, and problems with movement that worsen over time. The signs and symptoms of these conditions usually begin in adulthood, and these disorders lead to death within a few months to several years. Only a small percentage of prion disease cases run in families. Most cases occur in people without any known risk factors or gene mutations. Creutzfeldt-Jakob disease is acquired by eating beef products obtained from cattle that have prion disease.
- **Huntington Disease** - Huntington disease is a progressive brain disorder that causes uncontrolled movements, mental and emotional problems, and loss of thinking ability. Adult-onset Huntington disease, is the most common form of this disorder, with onset usually in a person's thirties or forties. An early-onset, less common form of Huntington disease begins in childhood or adolescence. This condition is inherited in an autosomal dominant manner, which means one copy of the altered gene in each cell is sufficient to cause the disorder.
- **Gaucher Disease -** Gaucher disease is an inherited disorder that affects many of the body's organs and tissues. The signs and symptoms of this condition vary widely among affected individuals. There are several types of Gaucher disease based on their particular features. Some types do not affect the brain and spinal cord while others do. Type 1 Gaucher disease, for example, is the most common form of this disorder. Major signs and symptoms of Type 1 Gaucher disease include enlargement of the liver and spleen, a low number of red blood cells, easy bruising caused by a decrease in blood platelets, lung disease, and bone abnormalities such as bone pain, fractures, and arthritis. Types 2 and 3 Gaucher disease, on the other hand, have problems that affect the central nervous system. Gaucher disease is inherited in an autosomal recessive pattern, which means both copies of the gene in each cell have mutations. The parents each carry one copy of the mutated gene, but they do not show signs or symptoms of the disease.

GLOSSARY- INHERITED DISEASES (continued)

- **Wilson's Disease -** Wilson disease is an inherited disorder in which excessive amounts of copper accumulate in the body, particularly in the liver, brain, and eyes. Typically, signs and symptoms of Wilson disease first appear during the teenage years. Wilsonôs disease is inherited in an autosomal recessive pattern, which means both copies of the gene in each cell have mutations. The parents each carry one copy of the mutated gene, but they do not show signs or symptoms of the disease.
- **Tourette syndrome -** Tourette syndrome is a complex disorder characterized by repetitive, sudden, and involuntary movements or noises called tics. Tics usually appear in childhood, and their severity varies over time. In most cases, tics become milder and less frequent in late adolescence and adulthood. Individuals who have Tourette syndrome are also at risk for other associated problems including attention deficit hyperactivity disorder (ADHD), obsessive-compulsive disorder (OCD), anxiety, depression, and problems with sleep. A variety of genetic and environmental factors appear to play a role in causing Tourette syndrome. Most of these factors are unknown to date. Among family members of an affected person, it is therefore difficult to predict who else may be at risk of developing the condition.

Mental Health

- **Depression –** Clinical depression is an illness that can challenge a personôs ability to perform even routine daily activities, and in some cases lead a person to contemplate or commit suicide. There are several different types of depression (mood disorders that include depressive symptoms) such as major depression, bipolar disorder and seasonal depression. The causes of depression are complex. Genetic, biological, and environmental factors can contribute to its development. In some people, depression can be traced to a single cause, while in others, a number of causes are involved. For many, the causes are never known. Certain types of depression seem to run in some families. Research is ongoing as to exactly which genes are involved in depression.

Muscle/Bone Joint

- **Muscular dystrophy -** Muscular dystrophies are a group of genetic conditions characterized by progressive muscle weakness and wasting. The Duchenne and Becker types of muscular dystrophy primarily affect the skeletal muscles, which are used for movement, and the muscles of the heart. These conditions occur much more frequently in males than in females. Both Duchenne and Becker muscular dystrophy are inherited in an X-linked recessive pattern, with the mutated gene that causes the disorder on the X chromosome. Males are affected by X-linked recessive disorders much more frequently than females.
- **Achondroplasia -** Achondroplasia is a disorder of bone growth. particularly in the long bones of the arms and legs. All people with achondroplasia have short stature. Health problems commonly associated with achondroplasia include breathing difficulties (called apnea), obesity, and recurrent ear infections. Achondroplasia is inherited in an autosomal dominant pattern, which means one copy of the altered gene in each cell is sufficient to cause the disorder. About 80 percent of individuals with achondroplasia have average-size parents; these cases result from a new gene mutation in that individual. In the remaining cases, people with achondroplasia have inherited a gene from one or two affected parents.
- **Osteogenesis imperfecta -** Osteogenesis imperfecta (OI) is a group of genetic disorders that mainly affect the bones. People who have OI have bones that break easily, often from mild trauma or with no apparent cause. Multiple fractures are common, and in severe cases, fractures can occur even before birth. Milder cases may involve only a few fractures over a person's lifetime. There are at least eight recognized forms of osteogenesis imperfecta, designated type I through type VIII, distinguished by their signs and symptoms. Most types of osteogenesis imperfecta have an autosomal dominant pattern of inheritance, which means one copy of the altered gene in each cell is sufficient to cause the disorder. Many people with type I or type IV osteogenesis imperfecta inherit a mutation from a parent who has the disorder.

GLOSSARY- INHERITED DISEASES (continued)

- **Marfan syndrome -** Marfan syndrome is a connective tissue disorder. Connective tissue provides strength and flexibility to structures throughout the body such as bones, ligaments, muscles, the walls of blood vessels, and heart valves. Marfan syndrome affects most organs and tissues, especially the skeleton, lungs, eyes, heart, and the large blood vessel that distributes blood from the heart to the rest of the body called the aorta. Individuals who have Marfan syndrome often are tall and slender, have elongated fingers and toes, a long narrow face, highly arched palate, and have an arm span that exceeds their body height. About half of all people with Marfan syndrome have vision problems caused by a dislocated lens (ectopia lentis) Most people with Marfan syndrome have abnormalities of the heart and the aorta. This condition is inherited in an autosomal dominant pattern, which means one copy of the altered gene in each cell is needed to cause the disorder. At least one quarter of classic Marfan syndrome cases result from a new gene mutation. These individuals have no history of the disorder in their family.
- **Spinal muscular atrophy -** Spinal muscular atrophy is a disorder that affects the control of muscle movement. It is caused by a loss of specialized nerve cells, (motor neurons), in the spinal cord and the part of the brain that is connected to the spinal cord (the brainstem). The loss of motor neurons leads to weakness and shrinkage of muscles used for activities such as crawling, walking, sitting up, and controlling head movement. In severe cases of spinal muscular atrophy, the muscles used for breathing and swallowing are affected. There are a number of different subtypes of spinal muscular atrophy based on the age of onset and symptoms. Most types of spinal muscular atrophy are inherited in an autosomal recessive pattern, which means both copies of the gene in each cell have mutations. One type of spinal muscular atrophy is inherited in an autosomal dominant manner, which means one copy of the altered gene in each cell is sufficient to cause the disorder.
- **Reiter's disease -** Reiter's syndrome, also known as reactive arthritis, is a type of arthritis that occurs as a reaction to an infection somewhere in the body. Most infections that cause the disease begin in the bladder, urethra, penis, or vagina and are spread through sexual intercourse, a form of the disease called genitourinary Reiter's syndrome, or urogenital Reiter's syndrome. Other infections that can cause reactive arthritis include gastrointestinal infections due to eating contaminated food or handling contaminated substances, a form of the disease called gastrointestinal Reiter's syndrome, or enteric Reiter's syndrome. Reiter's syndrome affects mostly young men, between the ages of 20 and 40. Although researchers are not sure why some people develop reactive arthritis in response to certain infections, a genetic factor (presence of the HLA-B27 gene) appears to increase the risk.

Sight/Sound/Smell

- **Deafness –** There are several types of deafness including conductive hearing loss, neural hearing loss (nerve deafness), and mixed hearing loss (a combination of conductive and neural hearing loss). Some people are born deaf. Usually the cause is unknown. Although deafness is inherited in some families, deaf parents often have hearing children and hearing parents often have deaf children. Diseases and injuries of the ear can also cause deafness.
- **Blindness –** Blindness is a condition of lacking visual perception that is due to physiological or neurological factors. Blindness has a number of causes including disease and malnutrition. Blindness may have a genetic cause, and may also be a symptom of a particular genetic disorder. Recent advances in mapping of the human genome have identified genetic causes of low vision or blindness, for example the disorder called Bardet-Biedl syndrome.
- **Color blindness –** Color blindness is the inability to perceive differences between some of the colors that other people can distinguish. It is usually genetic in nature, but may also be due to eye, nerve or brain damage, or to exposure to certain chemicals. Color blindness can be inherited in families. Since the mapping of the human genome there have been many causative gene mutations discovered. Mutations capable of causing color blindness originate from at least 19 different chromosomes and many different genes.

GLOSSARY- INHERITED DISEASES (continued)

- **Retinoblastoma -** Retinoblastoma is a rare type of eye cancer that develops in the retina, the part of the eye that detects light and color. Although this disorder can occur at any age, it usually develops in young children. Most cases of retinoblastoma occur in only one eye, but both eyes can be affected. Retinoblastoma can be inherited in an autosomal dominant pattern which means that one copy of the altered gene in each cell is sufficient to increase cancer risk. A person with retinoblastoma may inherit an altered copy of the gene from one parent, or the altered gene may be the result of a new mutation. For retinoblastoma to develop, a second mutation in the other copy of the RB1 gene must occur in retinal cells during the person's lifetime. When there is a family history of retinoblastoma or if the person develops tumors in both eyes, the gene mutation is probably in all of the personôs cells, and that person is said to have an inherited form of retinoblastoma. A smaller number of individuals have retinoblastoma as a result of missing portions of chromosome 13 that are not inherited.

Skin

- **Albinism –** Albinisim is a condition in which there is a lack of melanin pigment in the eyes, skin and hair (or more rarely the eyes alone). Albinisim is hereditary and results from inheritance of recessive gene mutations. There are two main categories of Albinism - 1) **oculocutaneous albinism** in which there is a lack of melanin pigment in skin and hair, and 2) **ocular albinism**, in which only the eyes lack pigment. People with oculocutaneous albinism can have anywhere from no pigment at all to almost-normal levels. People who have ocular albinism have generally normal skin and hair color, and many even have a normal eye appearance. Albinism may also be a feature of a genetic syndrome such as Hermansky-Pudlak syndrome.
- **Neurofibromatosis –** There are two types of Neurofibromatosis ï Type 1 and Type 2. Neurofibromatosis type 1 is a disorder characterized by changes in skin coloring and the growth of tumors along nerves in the skin, brain, and other parts of the body. The signs and symptoms of this condition vary widely among affected people. Neurofibromatosis type 2 is a disorder characterized by the growth of noncancerous tumors in the nervous system. The most common develop along the nerve that carries information from the inner ear to the brain (the auditory nerve). Tumors that occur on nerves in other areas of the brain or spinal cord are also commonly seen with this condition. Both Type 1 and Type 2 Neurofibromatosis are considered to have an autosomal dominant pattern of inheritance. People with Neurofibromatosis Type 1 and Type 2 are born with one mutated copy of either the NF1 or NF2 mutated genes in each cell. In about half of cases, the gene mutation is inherited from an affected parent. The remaining cases result from new mutations in the gene and occur in people with no history of the disorder in their family. Unlike most other autosomal dominant conditions, in which one altered copy of a gene in each cell is sufficient to cause the disorder, two copies of either the NF1 or NF2 gene must be altered to trigger tumor formation in neurofibromatosis. A mutation in the second copy of the NF1 or NF2 gene occurs during a person's lifetime in specialized cells surrounding nerves. Almost everyone who is born with one NF1 or NF2 mutation acquires a second mutation in many cells and develops the tumors characteristic of the disease.

Congenital Abnormalities/Birth Defects

- **Cleft lip/palate –** Cleft lip and palate are common birth defects that affect the upper lip and the roof of the mouth. There are many causes of cleft lip and palate. Gene alterations passed down from one or both parents, drugs used or maternal viruses during pregnancy can cause cleft lip and/or palate. Cleft lip and palate can also be part of a genetic syndrome or occur with other birth defects. Risk factors for cleft lip and palate also include a family history of cleft lip or palate and other birth defects.
- **Congenital hip problems –** Congenital hip problems, also called hip dysplasia, involve problems with formation of the hip joint in children. The location of the hip dysplasia can be either the ball of the hip joint (femoral head), the socket of the hip joint (the acetabulum), or both. Hip dysplasia, called congenital dysplasia of the hip (or CDH) in the past is now called developmental dysplasia of the hip (DDH). There are a number of factors that contribute to cause DDH. One known risk factor is having a family history of hip dysplasia. Other causes include when the baby is born in breech position or when there is a lack of intrauterine fluid (oligohydramnios) during pregnancy.

GLOSSARY- INHERITED DISEASES (continued)

- **Club feet –** Clubfoot is a condition where the foot turns inward and downward. It is a congenital condition, meaning it is present at birth. Other terms for clubfoot are Talipes equinovarus and Talipes. Clubfoot is the most common congenital disorder involving the legs, and can range from mild and flexible to severe and rigid. Although the exact cause is not known, clubfoot may be passed down in some families. Family history, therefore, is a risk factor for clubfoot, as is being a male.
- **Heart Defect -** A congenital heart defect involves an abnormal structure of the heart that is present at birth. Congenital heart defects are the most common type of major birth defect. There are multiple causes of congenital heart defects including environmental and genetic factors. Genes that can cause congenital heart defects are now being discovered, such as a gene that can cause an atrial septal defect and one that may contribute to hypoplastic left heart syndrome. Congenital heart defects can also be a part of a wider pattern of birth defects and genetic syndromes such as Down syndrome, Turner syndrome and velocardiofacial syndrome.
- **Hearing problems -** There are several types of hearing loss including conductive hearing loss, neural hearing loss (nerve deafness), and mixed hearing loss (a combination of conductive and neural hearing loss). Some people are born with hearing loss. Usually the cause is unknown. Although hearing loss is inherited in some families, deaf parents often have hearing children and hearing parents often have deaf children. Diseases and injuries of the ear can also cause deafness.
- **Spina bifida -** Spina bifida is one of a group of birth defects called neural tube defects. Spina bifida occurs during fetal development when a portion of the neural tube fails to develop or close properly causing defects in the spinal cord and in the bones of the backbone. Spina bifida, like many other birth defects appears to be caused by a combination of genetic and environmental risk factors, such as a family history of neural tube defects, folic acid deficiency, and medical conditions such as diabetes and obesity.
- **Microcephaly -** Microcephaly is disorder in which the circumference of the head is smaller than normal because the brain has not developed properly or has stopped growing. Microcephaly can be present at birth or it may develop in the first few years of life. It is most often caused by genetic abnormalities that interfere with the growth of the cerebral cortex during the early months of fetal development. Microcephaly is associated with genetic syndromes such as Down syndrome, chromosomal syndromes, and neurometabolic syndromes, Babies may also be born with microcephaly if their mother abuses drugs or alcohol during pregnancy, or becomes infected with the German measles, chicken pox.
- **Holoprosencephaly -** Holoprosencephaly is a disorder caused by the failure of the embryonic forebrain (*prosencephalon)* to divide properly into the double lobes of the cerebral hemispheres. As a result, the baby has a single-lobed brain structure and severe skull and facial defects. In most cases of holoprosencephaly, the malformations are so severe that babies die before birth. In less severe cases, babies are born with normal or near-normal brain development and facial deformities that may affect the eyes, nose, and upper lip. Often, no specific cause for holoprosencephaly can be identified. There are some specific chromosomal abnormalities that have been identified as the cause of holoprosencephaly in some patients. In some families, holoprosencephaly is inherited in autosomal dominant or X-linked recessive inheritance. Several genes have also been identified that play a role in causing holoprosencephaly.

GLOSSARY- INHERITED DISEASES (continued)

Chromosomal Abnormalities

- **Down syndrome -** Down syndrome is a chromosomal disorder that is associated with mental retardation, a characteristic facial appearance, and poor muscle tone in infancy. Individuals who have Down syndrome may also have heart defects, digestive problems such as gastroesophageal reflux or celiac disease, hearing loss, and cancer of blood-forming tissue (leukemia). Some people with Down syndrome have hypothyroidism. Down syndrome also appears to be is associated with an increased risk of Alzheimer disease Down syndrome is usually caused by the presence of an extra chromosome number 21, called trisomy 21, which means each cell in the body has three copies of chromosome 21 instead of the usual two copies. Most cases of Down syndrome are not inherited, but occur as random events during the formation of egg or sperm. One type of Down syndrome, called translocation Down syndrome, can be inherited.
- **Fragile X syndrome -** Fragile X syndrome is a genetic disorder that involves a range of developmental problems including learning disabilities and mental retardation, and behavioral problems such as hyperactive behavior and attention deficit disorder. Males are usually more severely affected by this disorder than females. Many males with fragile X syndrome have characteristic physical features that become more apparent with age such as a long and narrow face, large ears, prominent jaw and forehead, unusually flexible fingers, and enlarged testicles after puberty. Most cases of fragile X syndrome are caused by a mutation in which a DNA segment, known as the CGG triplet repeat, is expanded within the FMR1 gene. Fragile X syndrome is inherited in families in an X-linked dominant pattern.
- **Turner syndrome -** Turner syndrome is a chromosomal disorder that affects development in females. Women with Turner syndrome are often shorter than average and are usually unable to conceive children because they lack ovarian function. Other features of Turner syndrome can include extra skin on the neck, puffiness or swelling of the hands and feet, skeletal abnormalities, heart defects, and kidney problems. Developmental delays, learning disabilities, and behavioral problems are may also be present, although these characteristics vary among affected females. In most cases, Turner syndrome is not inherited. Rather, it occurs as random events during the formation of egg or sperm.
- **Klinefelter syndrome -** Klinefelter syndrome is a chromosomal disorder that affects male sexual development. Most males who have Klinefelter syndrome have one extra copy of the X chromosome in each cell. The presence of an extra X chromosome interferes with male sexual development causing their testicles to develop abnormally, and leading to low levels of the hormone testosterone beginning during puberty. A lack of testosterone can lead to breast development, reduced facial and body hair, and an inability to father children. Boys who have Klinefelter syndrome may have learning disabilities and difficulty with speech and language development. Klinefelter syndrome is caused by the presence of one or more extra copies of the X chromosome in a male's cells. Klinefelter syndrome is not inherited, but usually occurs as a random event during the formation of egg or sperm.

Genetic History

- **Bloom syndrome -** Bloom syndrome is an inherited disorder that is characterized by a high frequency of breaks and rearrangements in an affected person's chromosomes. Individuals who have Bloom syndrome are usually much smaller than average, and often have a high-pitched voice and characteristic facial features including a long, narrow face; small lower jaw; and prominent nose and ears. They tend to develop pigmentation changes that often appear as a butterfly-shaped patch of reddened skin on the face. Other features of the Bloom syndrome may include learning disabilities, mental retardation, chronic lung problems, diabetes, and immune deficiency that leads to recurrent pneumonia and ear infections. Men with Bloom syndrome are usually not able to father children because they do not produce sperm. Women with the disorder generally experience menopause earlier than usual. Chromosome instability in Bloom syndrome also results in a high risk of cancer in affected individuals. Bloom syndrome is inherited in families in an autosomal recessive pattern, which means both copies of the gene in each cell have mutations.

GLOSSARY- INHERITED DISEASES (continued)

- **Canavan disease -** Canavan disease is an inherited disorder that causes progressive damage to nerve cells in the brain. The signs and symptoms of Canavan disease usually begin in early infancy; however, the course of the disorder can be quite variable. Infants with Canavan disease usually appear normal for the first few months of life. By age 3 to 5 months, these infants begin to have developmental delays in motor skills, weak muscle tone, large head size, and mental retardation. They may also develop feeding and swallowing difficulties, seizures, and sleep disturbances. Canavan disease is inherited in an autosomal recessive pattern, which means both copies of the gene in each cell have mutations.
- **Fabry Disease -** Fabry disease is an inherited disorder that begins in childhood and results from the buildup of a particular type of fat in the body's cells. Characteristic features of Fabry disease include episodes of pain, particularly in the hands and feet; clusters of small, dark red spots on the skin; a decreased ability to sweat; cloudiness of the front part of the eye; and hearing loss. Individuals with Fabry disease are also at risk for potentially life-threatening complications such as progressive kidney damage, heart attack, and stroke. Fabry disease is inherited in an X-linked pattern; however, unlike other X-linked disorders, Fabry disease causes significant medical problems in many females who have one altered copy of the mutated gene. These women may experience many of the classic features of the disorder.
- **Familial Dysautinomia -** Familial dysautonomia is a genetic disorder that affects the development and survival of certain nerve cells. The disorder causes disturbances in autonomic nerve cells, which control involuntary actions such as digestion, breathing, production of tears, and the regulation of blood pressure and body temperature. It also affects activities related to the senses, such as taste and the perception of pain, heat, and cold. Familial dysautonomia is also called hereditary sensory and autonomic neuropathy, type III. Problems related to this disorder first appear during infancy and include poor muscle tone, feeding difficulties, poor growth, lack of tears, frequent lung infections, and difficulty maintaining body temperature. Developmental delays in walking and speech, are usually present, although some affected individuals do not show signs of developmental delay. Familial dysautinomia is inherited in an autosomal recessive pattern, which means both copies of the gene in each cell have mutations.
- **Familial Mediterranean Fever -** Familial Mediterranean fever is an inherited disorder that involves recurrent episodes of painful inflammation in the abdomen, chest, or joints. These episodes are often accompanied by fever and sometimes a rash. The first episode usually occurs by the age of 20. For some affected individuals, however, the initial episode occurs much later in life. The episodes usually last 12 to 72 hours and may vary in severity and length of time between attacks. A buildup of protein deposits occurs in some cases of familial Mediterranean fever and this can lead to kidney failure if left untreated. This condition is inherited in an autosomal recessive pattern, which means both copies of the gene in each cell have the mutations. Rarely, familial Mediterranean fever may be inherited in an autosomal dominant pattern, which means one copy of an altered gene is sufficient to cause the disorder.
- **Fanconi Anemia -** Fanconi anemia is a rare, inherited blood disorder that causes bone marrow failure. Fanconi anemia causes the bone marrow to stop making enough new blood cells for the body to function normally. Infants born with Fanconi anemia are at higher risk for having birth defects. Fanconi anemia can also cause the bone marrow to make many abnormal blood cells, which can lead to serious health problems such as cancer. This condition is inherited in an autosomal recessive pattern, which means both copies of the gene in each cell have the mutations.
- **Niemann-Pick, Type A -** Niemann-Pick disease is an inherited disorder that involves lipid metabolism - the breakdown, transport, and use of fats and cholesterol in the body. In affected individuals the abnormal lipid metabolism causes harmful amounts of lipids to accumulate in the spleen, liver, lungs, bone marrow, and brain. There are four main types of Niemann-Pick disease. Type A presents during infancy and is characterized by an enlarged liver and spleen, failure to thrive, and progressive deterioration of the nervous system. Children born with Niemann-Pick, Type A generally do not survive past early childhood. Niemann-

GLOSSARY- INHERITED DISEASES (continued)

Pick, Type A is inherited in an autosomal recessive pattern, which means both copies of the gene in each cell have mutations.

- **Mucolipidosis Type IV -** Mucolipidosis Type IV is a genetic disorder, primarily which is characterized by severe neurological and ophthalmologic abnormalities. Also known as ML4, the disorder usually presents during the first year of life with mental retardation, corneal opacities, and delayed motor milestones. Children with ML4 begin to show signs of developmental delay during their first year of life. They usually attain a maximum developmental age of 15 months in language and motor function, although their receptive abilities are more advanced. They may also experience retinal degeneration that severely limits their vision. ML4 is inherited in an autosomal recessive pattern which means both copies of the gene in each cell have mutations.

Form **W-9**
(Rev. October 2007)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Give form to the requester. Do not send to the IRS.

Print or type See **Specific Instructions** on page 2.

Name (as shown on your income tax return)

Business name, if different from above

Check appropriate box: ☐ Individual/Sole proprietor ☐ Corporation ☐ Partnership
☐ Limited liability company. Enter the tax classification (D=disregarded entity, C=corporation, P=partnership) .....
☐ Other (see instructions)

☐ Exempt payee

Address (number, street, and apt. or suite no.)

Requesterôs name and address (optional)

City, state, and ZIP code

List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on Line 1 to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Social security number

or

Employer identification number

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
3. I am a U.S. citizen or other U.S. person (defined below).

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the Certification, but you must provide your correct TIN. See the instructions on page 4.

Sign Here **Signature of U.S. person** **Date**

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),

2. Certify that you are not subject to backup withholding, or

3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partnersô share of effectively connected income.

Note. If a requester gives you a form other than Form W-9 to request your TIN, you must use the requesterôs form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

ð An individual who is a U.S. citizen or U.S. resident alien,

ð A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,

ð An estate (other than a foreign estate), or

ð A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partnersô share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

The person who gives Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States is in the following cases:

ð The U.S. owner of a disregarded entity and not the entity,

ð The U.S. grantor or other owner of a grantor trust and not the trust, and

ð The U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person, do not use Form W-9. Instead, use the appropriate Form W-8 (see Publication 515, Withholding of Tax on Nonresident Aliens and Foreign Entities).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a ñsaving clause.ò Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items:

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.

2. The treaty article addressing the income.

3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.

4. The type and amount of income that qualifies for the exemption from tax.

5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity not subject to backup withholding, give the requester the appropriate completed Form W-8.

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 28% of such payments. This is called ñbackup withholding.ò Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,

2. You do not certify your TIN when required (see the Part II instructions on page 3 for details),

3. The IRS tells the requester that you furnished an incorrect TIN,

4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or

5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See the instructions below and the separate Instructions for the Requester of Form W-9.

Also see *Special rules for partnerships* on page 1.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of $50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a $500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Name

If you are an individual, you must generally enter the name shown on your income tax return. However, if you have changed your last name, for instance, due to marriage without informing the Social Security Administration of the name change, enter your first name, the last name shown on your social security card, and your new last name.

If the account is in joint names, list first, and then circle, the name of the person or entity whose number you entered in Part I of the form.

Sole proprietor. Enter your individual name as shown on your income tax return on the ñName.ò line. You may enter your business, trade, or ñdoing business as (DBA)ò name on the ñBusiness name.ò line.

Limited liability company (LLC). Check the ñLimited liability companyò box only and enter the appropriate code for the tax classification (ñDò for disregarded entity, ñCò for corporation, ñPò for partnership) in the space provided.

For a single-member LLC (including a foreign LLC with a domestic owner) that is disregarded as an entity separate from its owner under Regulations section 301.7701-3, enter the ownerôs name on the ñName.ò line. Enter the LLCôs name on the ñBusiness name.ò line.

For an LLC classified as a partnership or a corporation, enter the LLCôs name on the ñName.ò line and any business, trade, or DBA name on the ñBusiness name.ò line.

Other entities. Enter your business name as shown on required federal tax documents on the ñName.ò line. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on the ñBusiness name.ò line.

Note. You are requested to check the appropriate box for your status (individual/sole proprietor, corporation, etc.).

Exempt Payee

If you are exempt from backup withholding, enter your name as described above and check the appropriate box for your status, then check the ñExempt payee.ò box in the line following the business name, sign and date the form.

Generally, individuals (including sole proprietors) are not exempt from backup withholding. Corporations are exempt from backup withholding for certain payments, such as interest and dividends.

Note. If you are exempt from backup withholding, you should still complete this form to avoid possible erroneous backup withholding.

The following payees are exempt from backup withholding:

1. An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2),

2. The United States or any of its agencies or instrumentalities,

3. A state, the District of Columbia, a possession of the United States, or any of their political subdivisions or instrumentalities,

4. A foreign government or any of its political subdivisions, agencies, or instrumentalities, or

5. An international organization or any of its agencies or instrumentalities.

Other payees that may be exempt from backup withholding include:

6. A corporation,

7. A foreign central bank of issue,

8. A dealer in securities or commodities required to register in the United States, the District of Columbia, or a possession of the United States,

9. A futures commission merchant registered with the Commodity Futures Trading Commission,

10. A real estate investment trust,

11. An entity registered at all times during the tax year under the Investment Company Act of 1940,

12. A common trust fund operated by a bank under section 584(a),

13. A financial institution,

14. A middleman known in the investment community as a nominee or custodian, or

15. A trust exempt from tax under section 664 or described in section 4947.

The chart below shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 15.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 9
Broker transactions	Exempt payees 1 through 13. Also, a person registered under the Investment Advisers Act of 1940 who regularly acts as a broker
Barter exchange transactions and patronage dividends	Exempt payees 1 through 5
Payments over $600 required to be reported and direct sales over $5,000[1]	Generally, exempt payees 1 through 7[2]

[1] See Form 1099-MISC, Miscellaneous Income, and its instructions.

[2] However, the following payments made to a corporation (including gross proceeds paid to an attorney under section 6045(f), even if the attorney is a corporation) and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneysô fees, and payments for services paid by a federal executive agency.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN. However, the IRS prefers that you use your SSN.

If you are a single-member LLC that is disregarded as an entity separate from its owner (see *Limited liability company (LLC)* on page 2), enter the ownerôs SSN (or EIN, if the owner has one). Do not enter the disregarded entityôs EIN. If the LLC is classified as a corporation or partnership, enter the entityôs EIN.

Note. See the chart on page 4 for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local Social Security Administration office or get this form online at *www.ssa.gov*. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at *www.irs.gov/businesses* and clicking on Employer Identification Number (EIN) under Starting a Business. You can get Forms W-7 and SS-4 from the IRS by visiting *www.irs.gov* or by calling 1-800-TAX-FORM (1-800-829-3676).

If you are asked to complete Form W-9 but do not have a TIN, write ñApplied Forò in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note. Entering ñApplied Forò means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: *A disregarded domestic entity that has a foreign owner must use the appropriate Form W-8.*

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if items 1, 4, and 5 below indicate otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). Exempt payees, see *Exempt Payee* on page 2.

Signature requirements. Complete the certification as indicated in 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983. You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account)	The actual owner of the account or, if combined funds, the first individual on the account [1]
3. Custodian account of a minor (Uniform Gift to Minors Act)	The minor [2]
4. a. The usual revocable savings trust (grantor is also trustee)	The grantor-trustee [1]
b. So-called trust account that is not a legal or valid trust under state law	The actual owner [1]
5. Sole proprietorship or disregarded entity owned by an individual	The owner [3]
For this type of account:	**Give name and EIN of:**
6. Disregarded entity not owned by an individual	The owner
7. A valid trust, estate, or pension trust	Legal entity [4]
8. Corporate or LLC electing corporate status on Form 8832	The corporation
9. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
10. Partnership or multi-member LLC	The partnership
11. A broker or registered nominee	The broker or nominee
12. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity

[1] List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

[2] Circle the minor's name and furnish the minor's SSN.

[3] You must show your individual name and you may also enter your business or "DBA" name on the second name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

[4] List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships* on page 1.

Note. If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records from Identity Theft

Identity theft occurs when someone uses your personal information such as your name, social security number (SSN), or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

Call the IRS at 1-800-829-1040 if you think your identity has been used inappropriately for tax purposes.

Victims of identity theft who are experiencing economic harm or a system problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to *phishing@irs.gov*. You may also report misuse of the IRS name, logo, or other IRS personal property to the Treasury Inspector General for Tax Administration at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at: *spam@uce.gov* or contact them at *www.consumer.gov/idtheft* or 1-877-IDTHEFT(438-4338).

Visit the IRS website at *www.irs.gov* to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons who must file information returns with the IRS to report interest, dividends, and certain other income paid to you, mortgage interest you paid, the acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA, or Archer MSA or HSA. The IRS uses the numbers for identification purposes and to help verify the accuracy of your tax return. The IRS may also provide this information to the Department of Justice for civil and criminal litigation, and to cities, states, the District of Columbia, and U.S. possessions to carry out their tax laws. We may also disclose this information to other countries under a tax treaty, to federal and state agencies to enforce federal nontax criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism.

You must provide your TIN whether or not you are required to file a tax return. Payers must generally withhold 28% of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to a payer. Certain penalties may also apply.