

## NIH Opportunity Grant Helps Weiss Examine Lung-transplant Option

by Jennifer Nachbur

Lung specialists face numerous challenges in conjunction with treating patients with end-stage lung disease, many of whose only hope is lung transplantation, a solution saddled with risks, including a high rate of rejection. Thanks to a late-arriving, \$4.26 million Recovery Act grant—part of the limited National Institutes of Health (NIH) Director's Opportunity for Research funding competition—University of Vermont (UVM) physician-scientist Daniel Weiss, M.D., Ph.D., and colleagues will be able to vigorously examine a novel approach to growing new lungs for patients lacking other treatment options.

Among the diseases most commonly requiring a lung transplant is Chronic Obstructive Pulmonary Disorder (COPD)—a deadly combination of chronic bronchitis and emphysema—which is currently the fourth leading cause of death, with more than 12 million people diagnosed with the disease in the U.S. In addition, idiopathic pulmonary fibrosis, which affects about 128,000 people in the U.S., and cystic fibrosis, an inherited disease affecting the lungs and digestive system that is diagnosed in about 1,000 people annually, often lead to a need for lung transplantation.

Weiss's study, which he describes as "science fiction coming to life," focuses on the idea of using the scaffold—or framework—of lungs from human cadavers to engineer new lungs for patients with end-stage disease. The concept involves stripping the cells out of the cadaveric lungs—called decellularizing—and then replacing or recellularizing the cadaveric lungs with a patient's own stem cells. Stem cells, which are mostly found in the bone marrow, can turn into different types of blood cells, but also have been shown to become tissue cells in a wide variety of organs including the lungs. The process of removing stem cells from one's own blood or bone marrow is called an autologous transplant. Prior research conducted by Weiss and colleagues has tested this process in an animal model.

Researchers at UVM will be collaborating with investigators at Boston University, University of Connecticut, Tufts University, and Arizona State University to perform this study. The three-year award will support three new positions at UVM, as well as the purchase of new equipment. "This grant brings out some of the best collaborative opportunities UVM has to offer," says Weiss, who is an associate professor of medicine at UVM, a pulmonologist at Fletcher Allen and researcher in the Vermont Lung Center.

In addition to Weiss, co-investigators on the study include Gilman Allen, M.D., UVM assistant professor of medicine; Jason Bates, Ph.D., UVM professor of medicine; Albert van der Vliet,

Ph.D., UVM professor of pathology; Jeffrey Spees, Ph.D., UVM assistant professor of medicine and director of the UVM College of Medicine's Stem Cell Core; and former UVM faculty member James Iatridis, Ph.D., who currently serves as professor and director of spine research in the department of orthopedics at Mount Sinai School of Medicine.

## Indications for and Outcomes after Combined Lung and Liver Transplantation: A Single-center Experience

by Grannas, Gerrit; *Transplantation: 27 February 2008 - Volume 85 - Issue 4 - pp 524-531*

### Abstract

Background. Combined lung and liver transplantation (Lu-LTx) is a therapeutic option for selected patients with coexisting lung and liver disease. For several reasons, Lu-LTx is performed in few centers and information about the technical issues, posttransplant management and long-term outcomes associated with this procedure is limited.

Methods. We analyzed data from 13 consecutive patients who underwent combined Lu-LTx at Hannover Medical School (Hannover, Germany) between April 1999 and December 2003. The main indications were cystic fibrosis,  $\alpha$ 1-proteinase inhibitor deficiency and portopulmonary hypertension. All patients had advanced cirrhosis and severe pulmonary disease manifestation.

Results. Ten patients received a sequential double Lu-LTx, one patient received a single Lu-LTx, one received a double lung and split liver transplantation, and one received an en-bloc heart-lung and liver transplantation. Immunosuppression was based on cyclosporine in a triple/quadruple regimen. Postoperative surgical complications occurred in eight patients. There were two perioperative deaths; two patients died during the first year on day 67 and 354, respectively, and one patient died at month 53. The overall patient survival rates at 1, 3, and 5 years were 69%, 62%, and 49%, respectively.

### Conclusion

Combined Lu-LTx is a therapeutic option for highly selected patients with end-stage lung and liver disease with acceptable long-term outcome.

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## Researchers Generate iPSCs to Treat Various Lung Diseases

Source: Boston University Medical Center

Researchers at Boston University's (BU) Center for Regenerative Medicine and the Pulmonary Center have generated 100 new lines of human-induced pluripotent stem cells (iPSC) from individuals with lung diseases, including cystic fibrosis and emphysema. The researchers' findings, which have been published in the journal *Stem Cells*, demonstrate the first time lung disease-specific iPSC have been created in a laboratory. The new stem cell lines could possibly lead to new treatments for these diseases. The iPSCs are derived by reprogramming adult cells into a primitive stem-cell state. This process results in the creation of cells that are similar to embryonic stem cells in terms of their capability to differentiate into different types of cells, including endoderm cells that give rise to liver and lung tissue.

"iPSCs solve many major hurdles currently impacting embryonic stem-cell research," said Darrell Kotton, the study's lead author and associate professor of medicine and pathology and laboratory medicine at BU's School of Medicine. Induced pluripotent stem cells do not require embryos, and the process used to cultivate iPSCs is easier than the techniques used to obtain embryonic stem cells. Also, iPSCs are genetically identical to the patient's cells and potentially can be transplanted back without rejection.

The study involved patients with different forms of lung disease—cystic fibrosis, alpha-1 antitrypsin deficiency-related emphysema, scleroderma, and sickle cell disease. The patients underwent skin biopsies and donated tissue samples, which the research team used to cultivate adult stem cells. Using a BU patented vector in the form of a virus, named the Stem Cell Cassette (STEMCCA), the researchers were able to reprogram the skin cells into the primitive pluripotent stem cells known as iPSCs.

To test the differentiation power of the iPSCs, the researchers showed that the stem cells multiplied and could be differentiated into endoderm tissue, the natural precursor cells of the lung. The researchers hope to build a stem cell bank that could be used to help treat the two most common lung diseases, cystic fibrosis and alpha-1 antitrypsin deficiency. The next step, according to the researchers, is to correct the genetic mutations responsible for causing the diseases.

Solve the cryptogram—substitute letters to form a familiar phrase.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
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## Many Thanks

The Alpha-1 Advocacy Alliance gratefully thanks those contributors who have generously written checks this year to help us help other Alphas. Many thanks to our grant providers in 2010—Baxter Healthcare and Coram Home Health. In addition, the advertisers in our newsletter, *The Register*,



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Also, many thanks to the volunteers on our Board of Directors—Bryan Shelby, Deb Ehmen, Allen Russell, Bob James and Alice Hockaday and to our most brilliant Editor, Mary Fran Draisker. Without their generous donation of time, talents and energy, the Alliance could not continue to meet the needs of the community. This includes phone cards, 1AAT grants, educational scholarships, the laptop program and our educational materials and test kits and the Lending Library.



We invite you to visit the Alpha-1 Advocacy Alliance store and order a t-shirt or an Alphapotamus. Order magazines or shop through iGive.com and you make an effortless donation to the Alliance. Any way you can help is greatly appreciated.

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- |              |                         |
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| BLUEBELLS    | B L U E B E L L S I U J |
| BUTTERCUPS   | U O P H L O X Z D C L S |
| CROCUS       | T G J S Y K A A O I U Y |
| DAFFODILS    | T I S P P A F R M S A Q |
| FORGETMENOTS | E R G O P F C S S N K V |
| HYACINTH     | R A I R O S E I E F I T |
| IRIS         | C M R D P X C M N O A J |
| LILY         | U P I W P R O J L T Y E |
| MARIGOLD     | P L S O A N E E A J H Y |
| NARCISSUS    | S T O N E M T E G R O F |
| PHLOX        | W I R S U S M C I X D P |
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## Time in All Its Moods

by Ann Marie Benzinger



It absolutely amazes me how quickly time passes. Here we are with the Christmas holidays right here; Halloween and Thanksgiving are packed away in the memory banks. In no time we'll be wishing January and February out of sight anticipating the warmth of March and the spring of new life that April brings. Too bad we can't in reality make the rough times speed out of

our lives while the more comfortable good times would stick around and spend more time with us.

There are so many times in our lives that we have wanted time to fly—remember back to when you were a kid and you had done something wrong? It was agony waiting to either admit your errors or waiting to get caught. What about waiting for your acceptance letters from your college applications or waiting to hear about a job you really wanted? And then, when we grew up, waiting for medical test results was (or is) pure torture. Waiting for a sick child's temperature to drop can make time stand still. Tick, tick, tick. Time slows down when we worry or fear the result. Anticipation isn't always about a catsup bottle.

For sick patients, time can become their enemy. Sitting in a recliner, tethered to a 50-foot-oxygen cord, unable to breathe, prepare food or take care of themselves or their family. Children and adults with swollen tummies, uncomfortable with ascites, unable to participate like others seemingly unaffected by their common genetics. Alpha-1 can make time appear to stand still, freezing us in our tracks. Time can become our enemy or our ally as we work to survive the effects of Alpha-1 to our bodies and our minds. We have to use time wisely to make it work for us.

Very soon we will be seeing the New Year in and unveiling more time. Will your time be spent working with your illness or against it? Will you accept help when you need it so that your time is spent more comfortably? Will you push back when it would be so much easier to just sit there or instead, you'll exercise in your chair, get up and take a walk or get out and walk the mall? Maybe your time will be spent writing your story or jotting down your thoughts and reflections on the events in your life that have brought you here. Can you share your time by making one phone call a week to someone you know who yearns to hear someone's voice? Can you send out a personal note to anyone you think deserves an "atta boy!" or a thank you or a thinking of you card? It doesn't take a five dollar Hallmark card to brighten a day. It only takes your gift of time, a piece of paper and a stamp.

I wish you the gift of good times—healthy times—and the right time. May your holidays and the New Year bring you and your family excellent health, happy get togethers and time for you to spend time ON you.

## Integrated Analysis Demonstrates Alpha-1 Augmentation Therapy Significantly Reduces Loss of Lung Tissue in Patients with AAT-deficiency-related Emphysema

Talecris Biotherapeutics announced November 12 the publication of combined data from two studies demonstrating that augmentation therapy with Alpha(1)-Proteinase Inhibitor (Human) (A1PI) significantly reduces lung tissue loss in patients with emphysema related to Alpha(1)-antitrypsin (AAT) deficiency. Results of the studies, published as an integrated analysis of the raw data from two similar pilot trials, were published in the journal *Respiratory Research* (<http://respiratory-research.com/content/11/1/136>).

Two randomized, double-blind, placebo-controlled clinical trials investigated the effect of A1PI therapy on emphysema progression using change in lung density as a measure. Lung density is a validated and specific measure of tissue loss in emphysema that relates well to physiological and clinical features of the disease.

Although the two studies used different intravenous dosing regimens, they were comparable in treatment duration, patient characteristics and the use of computed tomography (CT) to study lung density. The similar characteristics of the studies allowed the pooling of the individual patient data, which increased the robustness of the analysis. An analysis of the data from both studies was conducted by Professor Robert A. Stockley, Birmingham, UK, and Professor Asger Dirksen, Hellerup, Denmark. The results of the integrated analysis demonstrated a mean change in lung density from baseline to the final CT scan of -4.082 g/L for the AAT treatment group and -6.379g/L for the placebo group, a statistically significant difference of 2.297 (95% CI, 0.669 to 3.926;  $p = 0.006$ ). This mean data demonstrates a deceleration of lung tissue loss with AAT augmentation therapy versus placebo with statistical significance.

The two clinical trials included in the integrated analysis were a three-year Danish-Dutch study of 56 patients (<http://ajrccm.atsjournals.org/cgi/content/full/160/5/1468>) and the EXAcerbations and CT scan as Lung Endpoints (EXACTLE) trial of 77 patients over 24 to 30 months (<http://erj.ersjournals.com/content/33/6/1345.full>). In both trials, patients were randomized to receive infusions of A1PI or a placebo. The results suggested a trend toward reduction in emphysema progression with A1PI therapy, as measured by CT densitometry. The trials were not powered to show efficacy; thus neither trial reached statistical significance on its own. Pooling the data increased the number of patients and the statistical power of the analysis.

## Healthcare Reform Adds Twists to Medicare for Upcoming Annual Enrollment, Allsup Says

September 09, 2010 | *Business Wire*

Healthcare legislation passed earlier this year may make the upcoming Medicare annual enrollment season particularly challenging, according to Allsup, a nationwide provider of Social Security disability representation and Medicare plan selection services.

“Choosing a Medicare plan for the first time or re-evaluating your coverage based on your changing needs can be overwhelming in any year,” said Adrienne Muralidharan, senior Medicare specialist for the Allsup Medicare Advisor®, a Medicare plan selection service for people with disabilities and those over 65. “However, this year there are not only the usual changes, such as higher premiums or plan details, you also need to understand how the Patient Protection and Affordable Care Act may affect your 2011 Medicare coverage.” The timing is right, Muralidharan added, for the first baby boomers turning 65 early next year to begin educating themselves on their Medicare options before annual enrollment gets under way. Annual enrollment runs from Nov. 15 to Dec. 31 allowing people to select their Medicare coverage for 2011.

### Healthcare Reform Provisions Affecting Medicare in 2011

The *Patient Protection and Affordable Care Act* makes changes across healthcare. These changes include several provisions specific to Medicare:

Prescription drug costs should be lower in the donut hole. The new healthcare law seeks to eventually eliminate the current gap in Medicare prescription drug coverage (known as the “donut hole”), when beneficiaries are required to pay for all their medication costs. For 2011, Medicare beneficiaries will receive a 50 percent discount for the cost of brand-name prescription drugs and a 7 percent discount for generic drugs they are taking while in the prescription drug donut hole.

Medicare Part B will fully cover preventive care. Medicare Part B is medical insurance that covers things such as physical exams and outpatient treatment. Beginning next year, Medicare beneficiaries will no longer have to pay deductibles or co-pays for preventive services that fall under U.S. Preventive Service Task Force guidelines, such as an annual wellness exam. The new law also waives the Medicare deductible for colorectal cancer screening tests.

More beneficiaries may have higher costs for Medicare Part B and Part D coverage. Changes to income-threshold rules and subsidies will affect how much people pay. For Part B coverage, individuals with modified adjusted gross income (income) over \$85,000 and married couples with income above \$170,000 in 2010 had higher premium costs. Under the former rules, the income threshold was to increase based on the annual inflation rate. However, under healthcare reform rules, the income threshold freezes at the 2010 levels through 2019, meaning more people may have to pay the higher premiums. Beneficiaries above these incomes also are not protected by a “hold harmless” clause, which freezes premiums in years where there is no Social Security cost of living adjustment (COLA), as was the case in 2010 and many expect is likely for 2011. In addition, the law reduces the Medicare Part D (prescription drug) premium subsidy for individuals with incomes above \$85,000 and couples with incomes above \$170,000.

Opportunities to change coverage after annual enrollment period will be more limited. Medicare has made significant changes to the open enrollment period, which begins Jan. 1, immediately after annual enrollment closes on Dec. 31. Historically, this “open enrollment” period ran through March 31, during which time people could switch from their existing Medicare plans to similar Medicare coverage, choosing from “like to like” options. However, under the new rules, open enrollment only runs Jan. 1 to Feb. 15 in 2011 and people are limited to disenrolling from their Medicare Advantage plan to enroll in traditional Medicare. Other selections will not be available to consumers.

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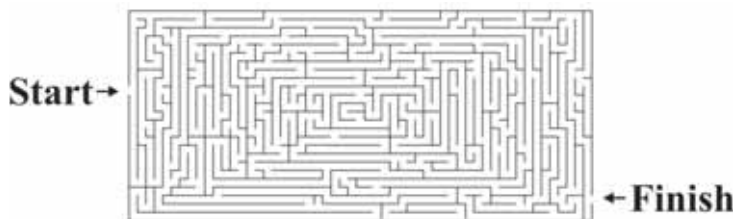
Additionally, under the new healthcare legislation, changes are being made to Medicare Advantage plans starting in 2011 to enhance quality and ensure they compete more equally with traditional Medicare. "It's easy to get confused between Medicare annual enrollment and open enrollment," Muralidharan said. "However, it's now more important than ever to look at annual enrollment as your main opportunity to choose your coverage."

#### Other Changes to Come

Each year, Medicare premium costs may increase and plan details may change. For Medicare Part B, the premium cost for most people is tied to the Social Security COLA, determined in October for the following year. The Centers for Medicare & Medicaid Services (CMS), which administers Medicare, has said that premiums for Part D plans are expected to increase by about \$1 on average to \$30 for 2011, and more detail on both Part D and Medicare Advantage plans (Part C) premiums and plans will be available in the coming weeks.

For an evaluation of your Medicare options, please call an Allsup Medicare Advisor specialist at (888) 271-1173 or go to <http://www.allsup.com/medicare-advisor.aspx>.

Can you find the way to the finish?



## Short- and Long-term Outcomes of Lung Transplant Recipients at a Single Center

by Daniel Kreisel, MD, PhD, Alexander S. Krupnick, MD, Varun Puri, MD, Tracey J. Guthrie, RN, Bryan F. Meyers, MD, G. Alexander Patterson, MD, all from The Division of Cardiothoracic Surgery, Department of Surgery, Washington University in St Louis, MO; and Elbert P. Trulock, MD, The Division of Pulmonary and Critical Care Medicine, Department of Medicine, Washington University in St Louis, MO published online 22 November 2010, © 2010 The American Association for Thoracic Surgery. Published by Elsevier Inc. All rights reserved.

**Objective:** To review a single-institution experience of adult lung transplants.

**Methods:** We reviewed 1000 adult lung transplants that were performed at Washington University between July 1988 and January 2009.

**Results:** Transplants were performed for emphysema (52%), cystic fibrosis (18.2%), pulmonary fibrosis (16.1%), and pulmonary vascular disease (7.2%). Overall recipient age was 48

± 13 years with an increase from 43 ± 12 years (July 1988–November 1993) to 50 ± 14 years (June 2005–January 2009). Overall incidence of primary graft dysfunction was 22.1%. Hospital mortality was higher for primary graft dysfunction patients (primary graft dysfunction, 13.6%; no primary graft dysfunction, 4%;  $P < .001$ ). Freedom from bronchiolitis obliterans syndrome was 84% at 1 year, 38.2% at 5 years, and 12.2% at 10 years. Survival at 1, 5, 10, and 15 years was 84%, 56.4%, 32.2%, and 17.8%, respectively. Five-year survival improved from 49.6% (July 1988–November 1993) to 62.1% (October 2001–June 2005). Primary graft dysfunction was associated with lower survival at 1, 5, and 10 years (primary graft dysfunction: 72.8%, 43.9%, and 18.7%, respectively; no primary graft dysfunction: 87.1%, 59.8%, and 35.7%, respectively,  $P < .001$ ) and lower rates of freedom from bronchiolitis obliterans syndrome (primary graft dysfunction: 78%, 27.5%, and 8.5%, respectively; no primary graft dysfunction: 85.4%, 40.7%, and 13.1%, respectively,  $P = .007$ ).

**Conclusions:** Five-year survival has improved over the study period, but long-term outcomes are limited by bronchiolitis obliterans syndrome. Primary graft dysfunction is associated with higher rates of bronchiolitis obliterans syndrome and impaired short- and long-term survival. A better understanding of primary graft dysfunction and bronchiolitis obliterans syndrome is critical to improve outcomes.

*This report is encouraging to the transplant community. Alpha-1 patients are classified under the umbrella term of COPD. The five year survival rate has drastically improved over the years.*

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## How Many Calories Should You Eat in a Day?

from John Hopkins Health Alerts

How do you know how many calories you should consume in a day? The answer depends on several factors: gender, age, activity level, metabolism, current weight, and goal weight. In this Health Alert we explain how to calculate your basal metabolic rate (BMR).

The more muscle mass you have, the more calories you need to maintain it. That's why men usually need more calories than women, younger people more than older people, and active people more than sedentary people. Age robs you of muscle. Beginning at age 45, the average person loses about 10% of his or her muscle mass (1/3 to 1/2 lb) each decade. This muscle tissue is replaced with fat, which burns far less calories than muscle. Also, your metabolism slows down as you age, so your body requires fewer calories.

That's where activity comes in. Exercise can speed metabolism, burn fat, and increase muscle mass. It also lets you eat a bit more without adding pounds or to lose weight without starving. The U.S. Department of Agriculture (USDA) Dietary Guidelines for Americans outlines three activity levels to help decide how many calories you should be getting:

**Sedentary:** Lifestyle includes only light physical activity associated with typical day-to-day life.

**Moderately active:** Includes physical activity equivalent to walking about 1.5 to 3 miles per day at 3 to 4 miles per hour, or 30 to 60 minutes a day of moderate physical activity, in addition to daily activities.

**Active:** 60 or more minutes a day of moderate physical activity in addition to daily activities.

To determine calorie intake, dietitians use a formula known as the Harris-Benedict principle to assess a person's basal metabolic rate (BMR), which is the amount of energy your body needs to function while at rest.

Step 1: Calculate Your BMR.

**Women:**  $655 + (4.3 \times \text{weight in pounds}) + (4.7 \times \text{height in inches}) - (4.7 \times \text{age in years})$ ; **Men:**  $66 + (6.3 \times \text{weight in pounds}) + (12.9 \times \text{height in inches}) - (6.8 \times \text{age in years})$

Step 2: Adjust for Activity.

If you are bedbound: Multiply your calculated BMR by 1.2  
If you are sedentary: BMR x 1.4  
If you are moderately physically active (some planned exercise/ walking most days):

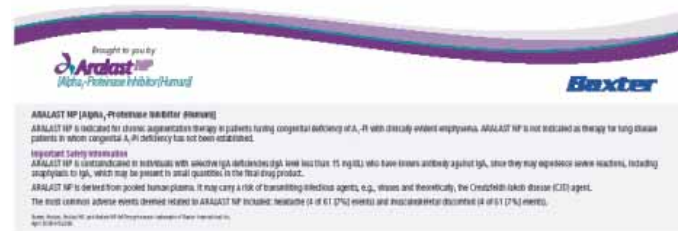


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BMR x 1.5 If you are very physically active: BMR x 1.6. The resulting number is your targeted calorie intake to maintain your weight.

**Editorial Note:** This formula is to maintain your weight. If you need to lose weight, eat a fewer number of calories; to gain, eat more calories each day. Consult your doctor before beginning any weight control program.

## Miniature Human Livers Created in the Lab

ScienceDaily (Oct. 31, 2010)

Researchers at the Institute for Regenerative Medicine at Wake Forest University Baptist Medical Center have reached an early, but important, milestone in the quest to grow replacement livers in the lab. They are the first to use human liver cells to successfully engineer miniature livers that function—at least in a laboratory setting—like human livers. The next step is to see if the livers will continue to function after transplantation in an animal model.

The ultimate goal of the research, which will be presented on October 31 at the annual meeting of the American Association for the Study of Liver Diseases in Boston, is to provide a solution to the shortage of donor livers available for patients who need transplants. Laboratory-engineered livers could also be used to test the safety of new drugs.

To engineer the organs, the scientists used animal livers that were treated with a mild detergent to remove all cells (a process called decellularization), leaving only the collagen

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“skeleton” or support structure. They then replaced the original cells with two types of human cells: immature liver cells known as progenitors, and endothelial cells that line blood vessels. The cells were introduced into the liver skeleton through a large vessel that feeds a system of smaller vessels in the liver. This network of vessels remains intact after the decellularization process. The liver was next placed in a bioreactor, special equipment that provides a constant flow of nutrients and oxygen throughout the organ. After a week in the bioreactor system, the scientists documented the progressive formation of human liver tissue, as well as liver-associated function. They observed widespread cell growth inside the bioengineered organ.

The ability to engineer a liver with animal cells had been demonstrated previously. However, the possibility of generating a functional human liver was still in question. The researchers said the current study suggests a new approach to whole-organ bioengineering that might prove to be critical not only for treating liver disease, but for growing organs such as the kidney and pancreas. Scientists at the Wake Forest Institute for Regenerative Medicine are working on these projects, as well as many other tissues and organs, and also working to develop cell therapies to restore organ function.

*Editor's Note: This article is not intended to provide medical advice, diagnosis or treatment.*

## Faith Predicts Survival after Liver Transplant

By John Gever, Senior Editor, MedPage Today; Published: October 01, 2010; Reviewed by Robert Jasmer, MD; Associate Clinical Professor of Medicine, University of California, San Francisco.

Patients scheduled for liver transplant who felt that God could help them with their illness tended to survive longer after surgery than those without religious faith, researchers said. With median follow-up time after transplant of 21 months, those with high “seeking-God” scores on a religiosity questionnaire were three times as likely to survive as those with low scores (adjusted hazard ratio 2.95, 95% CI 1.05 to 8.32), according to Franco Bonaguidi, DPsych, of the University of Pisa in Italy, and colleagues.

After 36 months, 6.6% of those ranking high on the seeking-God scale had died whereas mortality among those with lower scores was 20.5%, they reported in the October issue of *Liver Transplantation*. “This study shows that liver transplant candidates with high religious coping (defined as seeking God’s help, having faith in God, trusting in God, and trying to perceive God’s will in the disease) have more prolonged post-transplant survival than patients with low religiosity,” Bonaguidi and colleagues wrote.

The findings are the latest to suggest that religious faith has health benefits. Two years ago, researchers analyzing data from the Women’s Health Initiative reported that participants expressing religious attachments had lower mortality rates. Another

study found slower progression of HIV disease in those with increased religiosity after diagnosis.

Bonaguidi and colleagues, like the previous researchers, had no specific explanation for how religious faith may boost somatic health. “The possible underlying physiological mechanisms linking religiosity with survival are not known to us,” they wrote. However, they speculated that “faith as a way of coping is a real resource for seriously ill patients and helps to improve their prognosis,” rather than being simply a marker for some other factor with a more clear-cut protective mechanism.

In the study, 179 liver transplant candidates from 2004 to 2007 agreed to complete a questionnaire about their attitudes toward religion-based coping strategies. Specifically, they were given 10 statements such as “I sought God’s help in dealing with the situation” and “I accepted that the situation was not in my hands but in the hands of God,” and asked to score their agreement with each on a five-point Likert scale (ranging from “not at all” to “very much”).

Their responses were then scored on three scales — seeking God, waiting for God, and fatalism — according to the researchers’ interpretation that strong agreement with some statements indicated an active self-perceived relationship with God, whereas others indicated a more passive form of faith or a belief that their fate was already determined.

Half the patients were judged to have high seeking-God scores.

High scores on the latter two factors were not associated with improved survival, Bonaguidi and colleagues reported.

They included a quote from one patient that epitomized the sort of attitude that appeared to promote survival: “I recovered my life by the will of someone up there who loves me. I knew I was in God’s hands, I had great faith in Him, I was with Him. This closeness made me feel strong and calm.”

Other factors besides seeking-God faith that also predicted improved survival in univariate analysis included younger age, shorter length of postoperative ICU stay, and low bleeding during surgery.

In multivariate analysis including these and other factors such as serum creatinine, Child-Pugh scores, source of liver disease, and donor age, only length of ICU stay and high seeking-God scores were significantly associated with survival (for ICU stay, survival HR 1.05, 95% CI 1.01 to 1.08).

Bonaguidi and colleagues did identify several limitations to the study including the fact that the questionnaire was given prior to transplant and the researchers had no data on possible changes in participants’ religious views following the procedure or whether they had already changed from before they were diagnosed. Also lacking were data on specific religious affiliations or attendance at formal services. The researchers also noted that the study had relatively few patients and a low rate for the primary outcome. That it was conducted in Italy also suggests caution in extrapolating the findings to other societies.

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*Source reference: Bonaguidi F, et al., “Religiosity associated with prolonged survival in liver transplant recipients,” Liver Transpl 2010; 16: 1158-1163.*



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## **Inside:**

**THE ALPHA-1 FAMILY PROVIDING INFORMATION AND EDUCATION TO THE COMMUNITY.**

## **Alphapotamus**

My wish to all you Alphapotamuses is that you have a very Merry Christmas and that the New Year, 2011, is a very healthy one for you and your family.

Make your plans now to share in the upcoming year. Plan on sharing you. What does this mean—to share you?

It means share your time with others that might go to waste sitting in front of the television watching re-runs of *I-Carly* or *Friends* or *Law and Order*. This could mean you stop and read a book to a younger brother or sister or play a game with them. It could mean you pick up the broom and sweep off the porch. You could go help out a neighbor in need of snow shoveling. Look around and see what needs to be done. Sit next to someone at school who looks alone or someone you do not know. Sneak an extra hug to your Mom or Dad and just say thanks!

Remember this season of giving. Not everyone is happy and not everyone is healthy, but you can do your best to be happy and healthy and then share that happy, healthy YOU with your friends and family.

**Smile: remember your manners and Merry Christmas from Alphapotamus!!**

