

# HCV ADVOCATE WEEKLY NEWS REVIEW

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*Review of HCV, HBV and HIV/HCV Coinfection Related News and Highlights*

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May 24, 2009

### ***Statins May Potentiate Inhibition of Hepatitis C Virus Replication***

<http://onthewards.com>

Statins (HMG CoA reductase inhibitors) have traditionally been prescribed for the treatment of hypercholesterolemia, but the landmark JUPITER trial revealed other cardiovascular benefits of their use even in patients with low LDL. I also recently wrote an blog article about a published sub-analysis of the JUPITER data demonstrating that rosuvastatin decreases the risk of symptomatic venous thromboembolism.

It appears that the advantages of statin use may also extend beyond modification of cardiovascular outcomes. It is thought that statins have inhibitory properties against hepatitis C virus (HCV) replication. In a recent study published in *Hepatology*, a group at the Katholieke Universiteit Leuven (or Liège, depending on whether you are Flemish or Wallonian) in Belgium examined five statins and their in vitro activity against HCV, in the presence or absence of antiviral therapy.

The statins included mevastatin, simvastatin, lovastatin, fluvastatin, and pravastatin. They were tested in concert with interferon-alpha, NS5B polymerase inhibitors, and/or NS3 protease inhibitors. Certain combinations of statins and antiviral agents were able to clear cells of HCV within a few days, whereas the statins and antiviral agents were independently unable to clear the cells. The group found strongest antiviral activity with mevastatin and simvastatin. Mevastatin was also found to reduce the frequency of resistance to the non-nucleoside inhibitor HCV-796. Lovastatin and fluvastatin showed moderate inhibitory effects, while pravastatin had no effect.

Although the results demonstrate potential antiretroviral properties of statins, the study was performed in vitro. It is too early to ascertain whether these findings have any real therapeutic significance or potential in vivo.

#### Source

Ridker PM, Danielson E, Fonseca FA, Genest J, Gotto AM Jr, Kastelein JJ, Koenig W, Libby P, Lorenzatti AJ, MacFadyen JG, Nordestgaard BG, Shepherd J, Willerson JT, Glynn RJ; JUPITER Study Group. Rosuvastatin to prevent vascular events in men and women with elevated C-reactive protein. *N Engl J Med* 2008;359:2195-207.

Delang L, Paeshuyse J, Vliegen I, Leyssen P, Obeid S, Durantel D, Zoulim F, Op de Beeck A, Neyts J. Statins potentiate the in vitro anti-hepatitis C virus activity of selective hepatitis C virus inhibitors and delay or prevent resistance development. *Hepatology* 2009. [Epub ahead of print]

May 25, 2009

### ***A Potential Drug For Liver Carcinoma***

<http://www.medicalnewstoday.com>

Looking for efficient anti-tumor drugs is a hot research area. **Chrysin** (5,7-dihydroxy flavone), a natural widely-distributed flavonoid, has been reported to have many different biological activities such as anti-oxidant, anti-virus, antidiabetogenic activity and clear anxiolytic effect. However, Chrysin is limited in its clinical application because of its modest absorption in the intestine and rapid in vivo glycosylation. To improve the biological activity of chrysin, a number of its derivatives have been prepared for biological testing. 5-allyl-7-gen-difluoromethylenechrysin (ADFMChR) is one of them.

A research team led by Dr. Jian-Guo Cao from China investigate the anti-tumor effect of ADFMChR in vitro. Their study was published on May 14, 2009 in the *World Journal of Gastroenterology*.

In their study, HepG2 cells and L-02 cells were cultured and the inhibitory effect of ADFMChR

on their proliferation was measured by MTT assay. The apoptosis of HepG2 cells was determined by flow cytometry using propidium iodide fluorescence staining. The influence of ADFMChR on the proxisome proliferator-activated receptor  $\gamma$  (PPAR $\gamma$ ), NF- $\kappa$ B, Bcl-2 and Bax protein expression of HepG2 cells were analyzed by Western blotting.

They found that ADFMChR significantly inhibited the proliferation of HepG2 cells in a dose-dependent manner, with little effect on growth of L-02 cells. Western blotting analysis revealed that after 24 h of treatment with 3.0, 10.0, 30.0  $\mu$ mol/L ADFMChR, PPAR $\gamma$  and Bax protein expression increased but Bcl-2 and NF- $\kappa$ B expression decreased in HepG2 cells; however, pre-incubation with 10.0  $\mu$ mol/L GW9662, a blocker of PPAR $\gamma$ , could efficiently antagonize and weaken the regulatory effect of 3.0, 30.0  $\mu$ mol/L ADFMChR on PPAR $\gamma$  and NF- $\kappa$ B protein expression in HepG2 cells.

This finding may provide a molecular basis for the clinically observed cancer-preventive effects of ADFMChR and new clues for research about pharmaceutical prevention and cure of human liver carcinoma.

Reference: Tan XW, Xia H, Xu JH, Cao JG. Induction of apoptosis in human liver carcinoma HepG2 cell line by 5-allyl-7-gendifluoromethylenechrysin. *World J Gastroenterol* 2009; 15(18): 2234-2239 <http://www.wjgnet.com/1007-9327/15/2234.asp>

*Source: Lai-Fu Li, World Journal of Gastroenterology*

## **Correctional Facilities and Viral Hepatitis**

<http://www.corrections.com>

By "Centers for Disease Control and Prevention"

Editor's note: - the following is from the Centers for Disease Control and Prevention

Adults in correctional facilities are at risk for hepatitis B virus (HBV) infection through sex with HBV-infected persons, injection drug use, and sharing close living quarters with other inmates infected with HBV. In addition, a high percentage of prison inmates have hepatitis C virus (HCV) infection.

### **Hepatitis B Vaccination**

The Advisory Committee on Immunization Practices recommends hepatitis B vaccination for adults in correctional settings because of their increased risk for infection, both inside and outside of prisons and jails. Although the majority of HBV infections among incarcerated persons are acquired in the community, infection may also be transmitted within correctional settings. Furthermore, upon release, susceptible inmates are often at increased risk for infection if they resume high-risk behaviors.

Correctional settings also provide an opportunity to vaccinate at-risk adults who do not routinely access prevention services in the community. Vaccinating inmates in prisons has been demonstrated to be feasible and cost-saving. Many state prison systems and the Federal Bureau of Prisons have implemented hepatitis B vaccination programs of varying scope, and acceptance of vaccination by inmates is high.

## Hepatitis C Testing

The prevalence of HCV infection in prison inmates is substantially higher than that of the general U.S. population. Among prison inmates, 16%–41% have ever been infected with HCV, and 12%–35% are chronically infected, compared to 1%–1.5% in the uninstitutionalized US population. HCV infection is primarily associated with a history of injection drug use. CDC recommends that correctional facilities ask inmates questions about their risk factors for HCV infection during their entry medical evaluations. Inmates reporting risk factors should be tested for HCV infection and those who test positive for HCV should receive further medical evaluation to determine if they have chronic infection and/or liver disease.

## Guidelines and Recommendations

- [Hepatitis B Vaccination Recommendations for Adults](#)
- [Prevention and Control of Infections with Hepatitis Viruses in Correctional Settings](#)

May 26, 2009

## Government Responds To Archer Inquiry

<http://www.medicalnewstoday.com>

The Government today responded to the independent inquiry into contaminated blood supplies in the 1970s and 1980s.

In a Written Ministerial Statement, Public Health Minister Dawn Primarolo set out the Government's response to the Archer Inquiry into individuals infected by HIV and hepatitis C through infected NHS blood and blood products.

### The response includes:

- there will be a significant increase in annual payments to £12,800 for individuals infected with HIV, in addition to the £45 million already given out in lump sums and discretionary payments;
- further support for the Haemophilia Society of £100,000 per year for the next five years; and
- a commitment to review the financial relief for individuals affected by hepatitis C in five years.

Tough measures are already in place to prevent similar events happening in the future. To ensure all patients with bleeding disorders who may have been infected have been identified, a look back exercise will be undertaken.

Minister for Public Health, Dawn Primarolo said:

"I would like to offer my deepest sympathy to all those who suffered in this tragic episode. Sadly, it was not possible to effectively test for these viruses in the 1970s and early 80s and we deeply regret that these events occurred following NHS treatment.

"Steps to safeguard blood products against HIV and hepatitis C have been in place since 1985. Every reasonable step to minimise risks from blood transfusion has been taken and robust screening measures are in place to protect patients.

"In addition to the £150 million already given out in lump sums and discretionary payments to those infected with HIV and hepatitis C, financial help for those infected with HIV will rise to £12,800 per year."

The full response to Lord Archer's report has been placed in the Library of the House.

In keeping with the Government's commitment to make information available that relates to this period, the remaining 468 relevant documents have been placed on the Department of Health website.

*Source The Macfarlane Trust and Eileen Trust*

### ***Antibody to hepatitis B core antigen as a screening test for occult hepatitis B virus infection in Egyptian chronic hepatitis C patients***

[www.newsrx.com](http://www.newsrx.com)

Scientists discuss in 'Antibody to hepatitis B core antigen as a screening test for occult hepatitis B virus infection in Egyptian chronic hepatitis C patients' new findings in hepatitis B virus. According to recent research published in the *Journal of Gastroenterology*, "The presence of hepatitis B virus (HBV) DNA in liver tissue and/or in serum in the absence of detectable hepatitis B surface antigen (HBsAg) is called occult HBV infection. This pattern was identified in patients with chronic hepatitis C virus (HCV) infection."

"The aim of this study was to determine the role of antibodies to hepatitis B core antigen (anti-HBc) as a screening test for occult HBV infection in Egyptian chronic HCV patients. One hundred chronic HCV patients negative for HBsAg were included and subdivided into two groups according to anti-HBc-IgG seroreactivity. Group A included 71 patients positive for anti-HBc (53 men and 18 women, mean age +/-SD 48.8 +/-9.6 years), and group B included 29 patients negative for anti-HBc (18 men and 11 women, mean age +/-SD 46.6 +/-11.7 years). All patients were subjected to full clinical assessment, routine laboratory investigations, abdominal ultrasonography and quantification of HBV-DNA by real-time PCR. Chronic HCV patients positive for anti-HBc have more severe liver disease compared with anti-HBc negative patients. Although HBV-DNA in the serum was detected in 22.5% of anti-HBc-positive chronic HCV patients, it was not detected in any of anti-HBc-negative chronic HCV patients. There was no significant difference in any of the clinical and laboratory data tested between anti-HBc-positive patients with and without HBV-DNA in the serum. A significant number of patients with anti-HBc had detectable levels of HBV-DNA in the serum," wrote A. El-Sherif and colleagues, Al-Azhar University, Department of Internal Medicine.

The researchers concluded: "Egyptian chronic HCV patients have a high prevalence of occult HBV infection."

El-Sherif and colleagues published their study in the *Journal of Gastroenterology* (Antibody to hepatitis B core antigen as a screening test for occult hepatitis B virus infection in Egyptian chronic hepatitis C patients. *Journal of Gastroenterology*, 2009;44(4):359-64).

## **Look Back - Hepatitis B Awareness Month**

<http://www.asianweek.com>

The month of May was designated in 1990 as the “Asian Pacific American Heritage Month,” commemorating the immigration of the first Japanese to the United States on May 7, 1843, and to mark the anniversary of the completion of the transcontinental railroad on May 10, 1869. The majority of the workers who laid the tracks were Chinese immigrants.

But why is May also designated “Hepatitis B Awareness Month”, and why should it matter to the Asian Pacific Islanders (APIs) of San Francisco?

### THE FACTS:

- San Francisco has the highest rate of liver cancer in the nation.
- APIs make up 35% of the city’s population.
- 1 in 10 APIs are chronically infected with the hepatitis B virus (HBV).
- HBV infects the liver and causes liver cancer and ultimately premature death.
- HBV is a vaccine-preventable virus.
- Most people don’t even know they are infected.

In an effort to raise awareness about hepatitis B, numerous events and activities were organized throughout the month of May by the San Francisco Hep B Free Campaign and its many community and health care partners and volunteers.

### **May 2 – LIVERight at Golden Gate Park**

LIVERight is a 5K run/walk hosted by the Asian Liver Center at Stanford University and Answer to Cancer with the goal of raising awareness about hepatitis B and liver cancer. This year, LIVERight was held on Saturday, May 2 in Lindley Meadow of Golden Gate National Park, with more than 400 runners registered.

California State Majority Whip Fiona Ma and San Francisco Supervisor Carmen Chu were both on hand to kick off the race.

### **May 8 – Press Conference at City Hall**

A press conference was held on Friday, May 8 at San Francisco City Hall to announce a new study by the Asian Liver Center detailing the significant lack of hepatitis B knowledge among Bay Area prenatal care doctors.

More than a dozen publicly-elected officials from multiple agencies came out to express their support of the citywide campaign to eradicate hepatitis B from the API community, including Assessor-Recorder Phil Ting, Supervisors David Chiu, Sophie Maxwell, and Carmen Chu, Bart Board Member James Fang, Commissioner Norman Yee from the Board of Education, City College Board Members Milton Marks and Steve Ngo, City Administrator Ed Lee, and others.

Numerous partners and supporters from the San Francisco Hep B Free Campaign representing a dynamic cross section of business, community and health care groups were in attendance, and several speakers paid special tribute to Ted Fang and to the AsianWeek Foundation for its role in

making this initiative both a social movement in San Francisco and a model for the nation.

### **May 12 – Partnership: San Francisco Giants**

In partnership with the AsianWeek Foundation and the San Francisco Giants, members of the San Francisco Hep B Free Campaign were present at the games during Chinese Heritage Night (May 12), Korean Heritage Night (May 14), and Japanese Heritage Night (May 15) to educate Giants fans about the importance of getting tested and vaccinated for hepatitis B.

Assemblywoman Fiona Ma and Giants first baseman Travis Ishikawa carried this important message in a public service announcement that was played during the May 12 homeplate ceremony.

Ishikawa was featured on baseball cards containing facts about hepatitis B, and information about San Francisco Hep B Free was displayed on the scoreboard and on the clubhouse televisions throughout the game.

### **May 16 – Free Screenings at 5th Annual Asian Heritage Street Celebration**

Organized by the AsianWeek Foundation, the fifth annual Asian Heritage Street Celebration was held on Saturday, May 16 at the Civic Center. An estimated 100,000 attendees came out to enjoy the day's events, making it the largest Pan Asian street celebration in the nation.

Approximately 160 people took advantage of the free hepatitis B screenings presented by California Pacific Medical Center and the San Francisco Hep B Free Campaign.

Assemblywoman Fiona Ma and ABC7 anchor Alan Wang spoke to the audience about the importance of getting screened for hepatitis B and seeking appropriate medical care if diagnosed with HBV. Like so many APIs with chronic hepatitis B, both Ma and Wang themselves were infected at birth.

### **May 16 – Personal Story: Alan Wang of ABC7**

Alan Wang of ABC7 went public last year about his own personal battle with hepatitis B after learning that Assemblywoman Ma was also chronically infected. Wang's grandfather died of liver cancer, two of his uncles died of liver cancer, and his mother too has HBV. Undetected for so many generations in his family, Wang and all of his siblings were also infected at birth.

Wang talked about his participation at the Asian Heritage Street Celebration during his evening broadcast to help raise awareness of this serious disease.

### **May 28 – ORIENTED Happy Hour with SFHepBFree.org**

In recognition of Hepatitis B Awareness Month, the San Francisco chapter of ORIENTED.COM will be hosting its May Happy Hour with the San Francisco Hep B Free Campaign on Thursday, May 28 at the Lava Lounge on 527 Bryant Street.

This is a great opportunity to learn more about what you can do to protect yourself and your loved ones, while networking with international professionals interested in Asian business and partnerships. So come out and join the fun!

Other programs initiated in May by the San Francisco Hep B Free Campaign included the

distribution of 43,000 backpack flyers via the San Francisco Unified School District to educate the parents of school children about hepatitis B. Free screenings were conducted in multiple clinics throughout the city, and 30,000 custom-printed grocery bags with information about HBV were donated for distribution to local businesses by the CEO of Hayward-based Tri Star Plastic whose father was diagnosed with chronic hepatitis B and underwent a successful live transplant.

To learn how you too can get involved, visit the San Francisco Hep B Free Campaign website at <http://sfhepbfree.org> for more information.

### **About the San Francisco Hep B Free Campaign**

The San Francisco Hep B Free Campaign is a 'first-in-the-nation' effort calling on the collaboration of a wide spectrum of organizations to educate the public about the health risks of the hepatitis B virus (HBV) and to promote routine HBV screenings and vaccinations for the city's Asian and Pacific Islander (API) population. The Campaign is driven by the AsianWeek Foundation, San Francisco Department of Public Health and Asian Liver Center at Stanford University along with more than 150 community and health care groups, including the San Francisco Mayor's Office. Assemblywoman Fiona Ma serves as Honorary Chairperson.

*Written by AsianWeek Staff Report · Filed Under Asian Heritage Street Celebration, Bay Area*

**May 28, 2009**

### ***FDA Working Group Recommends Revising Acetaminophen Dosing, Labels***

<http://www.jwatch.org>

Patients may ask about reports that an FDA working group has recommended making changes to acetaminophen labeling and dosing to attempt to decrease acetaminophen-induced liver damage.

An FDA advisory committee will convene in late June to consider the working group's report, released online Wednesday. For over-the-counter acetaminophen, the working group recommends, among other actions:

- using stronger warnings on the drug's label;
- limiting the single adult dose to a maximum of 650 mg;
- lowering the maximum daily dose for adults from 4000 mg to no greater than 3250 mg (and less than that for chronic alcohol users);
- limiting immediate-release tablet formulations for adults to 325 mg;
- restricting pediatric liquid formulations to a single mid-strength concentration;
- eliminating acetaminophen from combination products.

### ***New Device For Liver Cancer Cleared***

<http://www.medicalnewstoday.com>

Acculis Limited, the UK based specialist microwave ablation company based in Denmead, England, announced the clearance of its latest device for coagulating and killing unwanted tissue during surgery. The device, designed for coagulations at the surface of the tissue fires controlled

high power microwave energy into the target area causing it to heat rapidly and the cells to die. Liver surgeons around the world are using the Acculis MTA System to address tumours inside the liver using its existing needle probes that take the microwave energy to the centre of tumours. Using the same control unit, this latest device allows surgeons to address deposits on the surface of the liver without using a needle. David Lloyd, consultant surgeon from Leicester Royal Infirmary, worked with Professor Nigel Cronin on the device which was also used by consultant HPB surgeons Graeme Poston, Liverpool Aintree and David Sherlock, North Manchester General during the development phase under MHRA control.

"During development we used the device to treat patients with multiple surface tumours quickly and decisively. There is no other high-tech device available in the market which can coagulate as quickly and as deeply as the Acculis Surface Applicator. It is extremely useful in patients with multiple tumours which are non-resectable. For example I successfully treated a patient with severe symptoms relating to more than 40 liver tumours using both this surface device and the high power needle. It is an important addition to our capability alongside the existing high power microwave needle probes." commented Lloyd.

The device will now be made available for patients in the UK and Europe under the CE mark at centres already employing the Acculis MTA System. These include Edinburgh Royal Infirmary, North Hants Hospital Basingstoke as well as the Leicester Royal, Liverpool Aintree and North Manchester General. The device will be distributed by Acculis' sister company Microsulis Medical Limited.

"The Acculis MTA System is a groundbreaking system for the inter-operative coagulation of tissue. Focussed and controlled high power microwave energy kills the target cells very rapidly by quickly raising their temperature while blood flowing around the outside of the target area keeps adjacent tissue cool. The simplicity of the system also allows surgeons and staff to focus on the treatment rather than on managing complex control and generator systems. We are delighted to add this new device to the range." said Acculis and Microsulis Managing Director, Stuart McIntyre.

Acculis is a specialist medical device company developing microwave energy ablation systems for oncology applications. Acculis is part of the Microsulis group of companies. Microsulis and Acculis are based in Hampshire, England. For more information about the Acculis MTA System, visit <http://www.acculis.com> , <http://www.microsulis.com> .

*Source: Acculis*

## ***New treatment option for patients with chronic hepatitis C***

<http://www.physorg.com/>

May 28th, 2009 A new combination therapy of **daily consensus interferon (CIFN) and ribavirin** is effective for some people with chronic hepatitis C (HCV) who do not respond to standard therapy. The treatment works particularly well in interferon-sensitive patients who have lower fibrosis scores, according to a new study in the June issue of *Hepatology*, a journal published by John Wiley & Sons on behalf of the American Association for the Study of Liver Diseases (AASLD).

Nearly half of all HCV patients do not respond to the standard therapy of pegylated interferon and ribavirin. They remain at risk for developing life-threatening liver disease. So far, other alternative therapies have not been particularly successful in these nonresponders.

One new treatment with the potential to help patients with persistent HCV involves high doses of daily consensus interferon (CIFN) combined with ribavirin. Researchers, led by Bruce Bacon of St. Louis University, conducted a multicenter trial to examine the efficacy, tolerability and safety of this approach.

The researchers studied 487 patients whose HCV had not responded to initial treatment with standard therapy. Many had characteristics that generally bode poorly for treatment response. Nearly all had HCV genotype 1; 80 percent had not responded strongly to their previous treatment; 68 percent had high baseline levels of the virus in their blood; 60 percent had advanced liver disease; and about 20 percent were African-American. These factors have all been shown to reduce rates of sustained viral response after treatment.

The patients were divided into three groups. Two would receive the new therapy at different doses, and the third would receive no therapy. After 24 weeks, the control group was stratified into one of the treatment arms.

Ultimately, 245 of the patients received 9 mcg of CIFN daily along with ribavirin, and 242 others took 15 mcg of CIFN daily along with ribavirin. After 24 weeks, patients with detectable HCV RNA were considered non-responders and stopped the therapy. Responders continued taking their therapy up through week 48, and were then followed-up through week 72. If HCV RNA was detected between weeks 48 and 72, the patient was classified as a relapser.

Nearly 7 percent of the patients taking 9 mcg of CIBN, and 10.7 percent of those taking 15 mcg, achieved a sustained viral response. The rates were even higher among patients who had responded better to the standard therapy and among those who had lower baseline fibrosis scores.

"The best response rate, 31.6 percent, was observed in noncirrhotic patients who had a partial virologic response with a greater than 2-log<sub>10</sub> decline in HCV RNA during their previous course of peg-IFN treatment," the authors report.

While adverse events were common, most patients continued their treatment in spite of them. Common side effects were neutropenia, fatigue, leucopenia, depression, nausea, muscle pain, lymphopenia and anemia.

"The present study demonstrated that some patients with chronic hepatitis C who have failed to respond to treatment with peg-IFN and RBV can be successfully retreated with daily CIFN and RBV," the authors conclude. "The greatest SVR rate during retreatment in the present study was observed in F0-F3 patients who had a partial virologic response during their prior course of treatment."

**More information:**

"Retreating Chronic Hepatitis C with Daily Interferon Alfacon-1/Ribavirin after Nonresponse to Pegylated Interferon/Ribavirin: DIRECT Results." Bacon, Bruce R.; Shiffman, Mitchell;

Mendes, Flavia; Ghalib, Reem; Hassanein, Tarek; Morelli, Giuseppe; Joshi, Shobha; Rothstein, Kenneth; Kwo, Paul; Gitlin, Norman. *Hepatology*; June 2009.

Source: *Wiley (news : web)*

## **Some donor factors affect outcomes for HCV-positive liver transplant recipients**

<http://www.physorg.com>

May 28th, 2009 – Two new studies address donor factors that could affect outcomes for liver transplant recipients, particularly those with chronic hepatitis C (HCV). One found that donor steatosis, or fat in the liver, does not affect liver disease progression or three-year survival in recipients with or without HCV. However, transplants from people higher on the Donor Risk Index did adversely affect the outcomes of HCV-positive recipients more than recipients without HCV.

These studies are in the June issue of *Liver Transplantation*, a journal published by John Wiley & Sons.

HCV is a common cause of end-stage liver disease. It accounts for almost half of the patients awaiting a liver transplant, 15 percent of whom will die before an organ becomes available. To address this critical shortage, researchers have searched for ways to expand the pool of potential donors. They have tried living donor liver transplantation, partial liver transplants, and the use of grafts from donors who may be less than ideal. Sub-optimal donors might include those of advanced age or with other medical conditions such as hepatic steatosis, also known as fatty liver disease, which is common in overweight individuals.

Researchers led by Patrizia Burra of Padova, Italy examined the impact of donor livers with steatosis on recipients with and without HCV. They included 116 consecutive liver transplants on 56 HCV-positive and 60 HCV-negative recipients and followed-up with liver biopsies at 6, 12, 24 and 36 months.

"There was no correlation between donor graft steatosis and fibrosis after liver transplantation, irrespective of the etiology of liver disease," the authors report. They also found no evidence that steatosis affected patient survival up to three years post-transplant.

In another study, researchers led by Daniel Maluf of Virginia Commonwealth University performed a retrospective analysis of 16,678 patients who received a liver transplant between January 2000 and June 2006. They examined the impact of the donor risk index (DRI) on patient outcomes.

"Increasing DRI was associated with a statistically significant increase in the relative risk of graft failure and patient death for both HCV-positive and HCV-negative individuals," they report. "However, HCV-positive recipients demonstrated a significantly higher increase in relative risk of patient and graft loss as a function of the DRI than HCV-negative subjects, even after adjustment for several recipient factors including MELD."

Donor age was the most significant, but not the only, factor that correlated to worse outcomes. The authors concluded that high DRI grafts should be used carefully in HCV-positive patients.

In an accompanying editorial, Sandy Feng of the UCSF Medical Center, supports the findings of these new studies, and highlights the need to focus on survival benefit for liver transplant recipients in a time of donor organ shortage.

"It is now possible to create an allocation algorithm that can systematically and objectively account for the variable impact of donor characteristics on liver transplant outcomes within the context of recipient diagnosis and disease severity," she concludes. "I believe that this would be the most equitable and transparent way to distribute the differential risk posed by the donor pool to individual transplant candidates."

**More information:**

*Article:*

"Impact of the Donor Risk Index in the Outcome of HCV+ Liver Transplant Recipients." Maluf, Daniel; Edwards, Erick; Stravitz, R.; Kauffman, H. Liver Transplantation; June 2009.

*Article:*

"Donor Livers with Steatosis are Safe to Use in HCV-Positive Recipients." Burra, Patrizia; Loreno, Massimiliano; Russo, Francesco; Germani, Giacomo; Galligioni, Alessandra; Senzolo, Marco; Cillo, Umberto; Zanus, Giacomo; Fagioli, Stefano; Ruge, Massimo. Liver Transplantation; June 2009.

*Editorial:*

"Increased Donor Risk—Who Should Bear the Burden." Feng, Sandy. Liver Transplantation; June 2009.

*Source: Wiley (news : web)*

**May 29, 2009**

***Severe hepatitis patients to receive special state support***

<http://www.pddnet.com>

TOKYO, May 30 (Kyodo) — The government is planning to grant patients with severe hepatic dysfunction eligibility for certificates for the physically disabled, which would enable them to receive special state support in the form of tax cuts, discounts in public transportation fees and welfare services, health ministry officials said Friday.

The Health, Labor and Welfare Ministry will grant the status to hepatitis patients possibly next year, after revising relevant ordinances. About 30,000 to 50,000 liver disease patients are expected to newly obtain such certification.

A panel of experts at the ministry agreed Friday that people suffering from all types of liver disorders who are seriously restricted in their daily lives and cannot expect to be completely cured should basically be entitled to the certificates.

Eligibility for the certificates had been sought by plaintiffs and their lawyers in damages suits filed against the state and pharmaceutical companies over tainted blood products that infected people with the hepatitis C virus.

## ***Illinois Senate Supports Medical Marijuana Bill***

<http://www.hepatitis-central.com>

Jason Nevel

*Passed by the Illinois Senate, Hepatitis C is among the ailments included in a controversial bill to legalize medical marijuana.*

*Medical marijuana bill heads to Illinois House*

SPRINGFIELD -- A proposal to legalize medical marijuana squeaked through the Illinois Senate on Wednesday and will now head to the House for further debate.

The measure would allow patients to use marijuana to alleviate chronic pain and nausea when other treatments have failed. The list of applicable conditions includes cancer, glaucoma, HIV/AIDS, Hepatitis C, Crohn's disease and Alzheimer's disease.

"This bill allows the use of marijuana in limited circumstances," said Senate sponsor William Haine, D-Alton, who was the former state's attorney for Madison County. "Someone doesn't have to go down the criminal element to buy marijuana."

The controversial issue sparked heated debate on the Senate floor but reached the necessary 30 votes to move to the House. Supporters noted the benefits of alternative treatment for ailing patients and that it's more natural than synthetic drugs.

"God grows these seeds," said state Sen. Mike Jacobs, D-East Moline, who voted for the legislation.

Opponents claimed the legislation lacked the police supervision and that the number of marijuana users could potentially increase.

"This is an invitation for trouble," said state Sen. Dale Righter, R-Mattoon.

State Sen. Tim Bivins, R-Dixon, added, "Once you say something is legal usage will go up."

The proposal would allow qualified patients to grow three plants in their home.

Along with Bivins and Righter other senators voting "no" included: Larry Bomke, R-Springfield; Bill Brady, R-Bloomington; and Dan Rutherford, R-Chenoa.

The legislation is Senate Bill 1381.

*URL for Article Source:*

<http://www.pantagraph.com/articles/2009/05/27/news/doc4a1ddc9e949f2170172413>

## ***Environmental Pollution Increases Risk Of Liver Disease, Study Finds***

<http://www.sciencedaily.com>

ScienceDaily (May 29, 2009) — A new study is the first to show that there is a previously unrecognized role for environmental pollution in liver disease in the general U.S. adult population. This work builds upon the groups' previous research demonstrating liver disease in highly-exposed chemical workers. The study is being presented during Digestive Disease Week® 2009 (DDW®), the largest international gathering of physicians and researchers in the fields of gastroenterology, hepatology, endoscopy and gastrointestinal surgery.

"Our study found that greater than one in three U.S. adults had liver disease, even after excluding those with traditional risk factors such as alcoholism and viral hepatitis," said Matthew Cave, MD, assistant professor, department of medicine, division of gastroenterology and hepatology at the University of Louisville. "Our study shows that some of these cases may be attributable to environmental pollution, even after adjusting for obesity, which is another major risk factor for liver disease."

Using the 2003-2004 National Health and Nutrition Examination Survey (NHANES), researchers from the University of Louisville study examined chronic low-level exposure to 111 common pollutants including lead, mercury, PCBs and pesticides and their association with otherwise unexplained liver disease in adults. The specific pollutants included were detectable in 60 percent or more of the 4,500 study subjects.

Dr. Cave added that this analysis used only the ALT liver enzyme as a marker of liver injury, and cautioned that this associative study does not prove causality. However, he added that previous animal studies do suggest causality for many of these chemicals. Dr. Cave and his co-authors also plan to examine the additive effects of environmental pollutants on liver disease in children and adults with risk factors including obesity, viral hepatitis, and alcoholism in the NHANES population.

Dr. Cave will present these data, Chronic Low-Level Exposure to Toxicants Linked to Liver Disease in U.S. Adults (Abstract #289), on Monday, June 1 at 8:30 a.m. CDT in S105, McCormick Place.

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