

A person with long dark hair, wearing a grey t-shirt with the text 'STOP LIVER CANCER' on the back, is pointing their right index finger towards a crowd of people. The crowd consists of many individuals, some looking towards the person pointing. The entire image has a teal color overlay.

2019

YEAR IN
REVIEW

#JOINJADE

RESEARCH

IDENTIFYING BARRIERS

USA In a systematic review of the scientific literature, visiting scholar, Simona Ispas, identified the major barriers to regular monitoring and liver cancer screening among hepatitis B patients are not only lack of patient's knowledge but also lack of disease knowledge and adherence to national guidelines among healthcare providers. The study was published in *Journal of Community Health*.



CALIFORNIA A study led by Dr. Stephanie Chao identified gaps in the practice patterns of obstetricians that need to be addressed to enhance the care they provide to protect infected pregnant women and newborns from hepatitis B.

VIETNAM has a high burden of chronic hepatitis B and liver cancer. Yet, timely newborn hepatitis B vaccination remains poor. Research led by Dr. Hang Pham at the ALC in collaboration with Department of Preventive Medicine, Vietnam Ministry of Health identified underlying gaps in hepatitis B knowledge and preventive practices. The two studies published in *PLOS ONE* recommended an immediate need to implement an effective hepatitis B education and training program among Vietnam's healthcare professionals and pregnant women.



POINT-OF-CARE DIAGNOSTICS

Current quantitative hepatitis B testing requires large and expensive machines. Researchers from the Stanford Department of Electrical Engineering and Asian Liver Center demonstrated the feasibility of developing a point-of-care, portable, quantitative device for hepatitis B screening, diagnosis, and treatment monitoring. The research was reported in *Scientific Reports*.



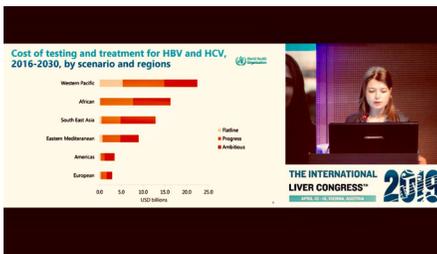
QINGHAI STUDY

Early results from the joint Qinghai CDC and ALC project showed among 60,027 pregnant women tested between 2016-2017, 3.2% were positive for chronic hepatitis B. The baseline study found as many as 5% of babies born to infected mothers became infected with hepatitis B. In the next phase of the project, additional improvements will be made towards the goal of eliminating mother-to-child transmission of hepatitis B.



MODELLING THE COSTS OF ELIMINATION

Dr. Mehlika Toy from the ALC was invited by the World Health Organization to report our collaborative research findings at the International Liver Conference in Vienna. She presented the estimated costs and health benefits of eliminating hepatitis B and C worldwide and also the additional resources needed for global viral hepatitis elimination through universal health coverage.



BOOSTING IMMUNOTHERAPY



Using a bioinformatics approach, researchers from Michigan State University headed by Dr. Bin Chen (left) in

collaboration with researchers at the Asian Liver Center received grant funding from the National Institute of Health to identify drug molecules that can work together with therapeutic antibodies to increase the treatment response rates of liver cancer patients.

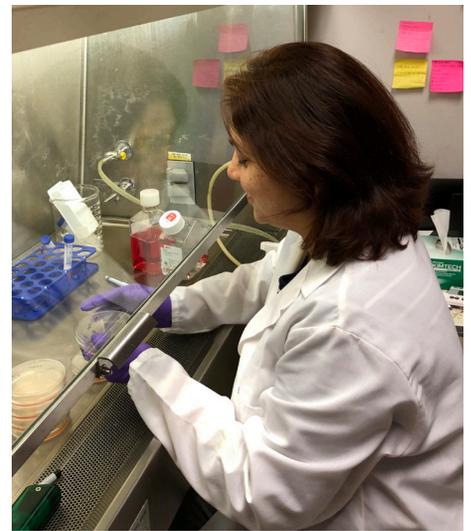
CAUSES OF LIVER TRANSPLANT IN USA

Research intern, Sonia Wang presented her findings at the annual meeting of the American Association for the Study of Liver Diseases in Boston. She reported liver disease and liver cancer caused by chronic hepatitis B and C remained a major reason among adults who received liver transplantation in the US from 2010 to 2017. Curative hepatitis C treatment, nevertheless has led to lower percentage of liver transplant for hepatitis C complications.



TARGETED DIAGNOSIS AND TREATMENT

We continue our work on targeted molecular diagnosis and treatment of liver cancer, including generating humanized antibodies and bioavailable prodrugs, to achieve our goals of improving liver cancer treatment and early detection. Postdoctoral research fellow Lakshmi Huttad shown in photo.



VISITING SCHOLARS FROM QINGDAO

We welcomed two visiting scholars from China's Qingdao Hospital to our lab - Dr. Bing Han (left), and Dr. Shihai Liu (right). This has helped form productive collaborations (one paper published this year) between our institutions to study novel candidate genes that may contribute towards liver cancer development and how we can target them for liver cancer treatment.

SUPPORTING GLOBAL HEPATITIS ELIMINATION

BEIJING

At the end of the two-day World Health Organization and China CDC National Workshop on hepatitis B and C prevention, diagnosis and treatment, Dr. So advocated that with the declining hepatitis B treatment drug costs, the time is now for China to launch a nationwide Initiative to provide effective hepatitis B antiviral therapy to the tens of millions who would benefit from treatment.



Dr. So was invited by the Maternal and Child Health Dept to participate in a meeting with China's national experts to update China's national guidelines to prevent mother-to-child transmission of hepatitis B.



MONGOLIA

Dr. So spent two weeks in Mongolia as a World Health Organization invited expert to evaluate the progress of the ambitious Mongolia national program to screen and treat chronic hepatitis B and C. His team from WHO and Mongolia Ministry of Health traveled to the remote provinces of Bayan-Ölgii and Khovd that borders Kazakhstan, Russia and China to monitor the progress in prevention, screening and treatment.



To promote World Hepatitis Day, ALC in Beijing again partnered with China CDC in 2019 to help design informational posters that the CDC distributed nationwide to promote hepatitis prevention, screening and treatment. In May and August, Dr. So also met with leaders from the China CDC, Mother and Child Health Bureau and Beijing CDC to discuss initiatives and policies that can accelerate hepatitis elimination in China.

GANSU AND QINGHAI



YUNNAN

China CDC, Beijing ALC staff and Dr. So visited Yunnan CDC in Kunming and traveled to Mangshi at the Myanmar border to explore opportunities for collaboration to improve healthcare workers training in hepatitis prevention and control.



China CDC joined Linda Zhang and Jiao Yang from Beijing ALC and Dr. So in September to evaluate the progress and discuss the next phase of our collaboration with both provincial health departments. Our two province-wide project to educate and protect infected mothers, and eliminate mother-to-child transmission of hepatitis B, have attracted national attention.

BEIJING CENTER

Located on the Peking University campus, the Asian Liver Center at the Stanford Center at Peking University leads the nationwide JoinJade campaign to raise hepatitis B awareness and eliminate hepatitis B discrimination. Our steadfast outreach efforts are helping to make a difference thanks to the leadership of our China program manager, Linda Zhang (4th from left), program coordinator, Jiao Yang (right), and the passionate commitments of a team of highly motivated and talented undergraduate and graduate student interns and volunteers.



CDC AND NON-PROFIT ORGANIZATIONS

In 2019 we invited and collaborated with 43 non-profit organizations and 4 provincial and city Centers for Disease Control and Prevention across China to participate in JoinJade activities to raise hepatitis B awareness on World Hepatitis Day.



MAJOR CORPORATIONS

6 additional corporations signed up to JoinJade in China. In 2019, an estimated 432,000 employees in 17 corporations in China partnered with us to engage in World Hepatitis Day online and offline activities to promote hepatitis B prevention and education.



Lectures and discussions about hepatitis B at Apple stores led by Linda Zhang from Asian Liver Center and expert from China Centers for Disease Prevention and Control were seen by employees at 51 Apple stores in Greater China.



Leaders from Lenovo, World Health Organization, China CDC, and Linda Zhang spoke at Lenovo headquarters on World Hepatitis Day. Employees who participated in the event were able to receive hepatitis B vaccination for free through the Beijing CDC.



UNIVERSITY TEAMS

In 2019, 80 university teams across China including teams from Tibet and Xinjiang received our support and funding for their proposals to educate the urban and rural communities about hepatitis B. Our Beijing Center provided each team with training through an online education course, JoinJade t-shirts, educational pamphlets and online resources, wristbands etc.



We learnt a lot ourselves while preparing for the courses, and we're so happy to see all these kids trying their best to understand

hepatitis B knowledge and being so active during the class."
- A volunteer from Peking University

Hepatitis B has always been a problem in the country. But people don't talk about it. Many hepatitis B carriers may not be tested or treated properly.



I thank you for bringing hepatitis B knowledge to us all, now they know it. I hope they will get tested.
- A country doctor from Shangluo, Shanxi



This is the very first time I learn about hepatitis B and that we should treat hepatitis B patients properly. I'm definitely going to tell my parents about this! Love these little gifts!

- A girl from Lu'an, Anhui

HBV GOES TO WORK

Asian Liver Center staff, interns, and volunteers distributed hepatitis B prevention education through workplace health fairs, volunteering sessions, informational talks, and cultural and athletic events, at 9 Silicon Valley corporate campuses including at Salesforce HepB Volunteering Day, Oracle Diwali 'Festival of Lights', Verizon Media 5K Run and Poshmark Health Fair.



TALKING CSR AT ASIA SOCIETY

The Center contributed to a panel in Responsibility and the Future, a forum discussing cooperation and corporate social responsibility. We shared strategies to engage corporations in hepatitis B preventive action.



IMPACTING THE FOOD CHAIN

Erik's DeliCafe owners Mayank Agarwal and Ambika Hallen helped display table tents, hang window posters, and distributed 5,000 'Get Tested' cards in Mountain View, Los Gatos, and Gilroy stores.



MEDIA MAKING A DIFFERENCE

Six of our hepatitis B Public Service Announcements in 4 Asian languages were played 550 times across 12 counties in Northern California thanks to the generous support of Crossings TV.



ASIA SOCIETY AWARD



Dr. Lloyd Minor, Dean of the Stanford University School of Medicine presented the Asia Society's Game Changer West Award to Dr. So for his past and ongoing contributions and advocacy to improve hepatitis B prevention, care and treatment in Asia.

VISIT BY BEIJING CDC



Deputy Director Dr. Pang Xinghuo (left) and Director for Science, Research and Training, Dr. Xiuying Liu (right) at the Beijing Center of

Disease Control and Prevention, came to visit the ALC to discuss the progress of our long-term collaboration and progress in hepatitis prevention and treatment in Beijing.

COMMUNITIES OUTREACH TO SOUTH ASIANS



As many as 1 in 40 Asian Indians has chronic hepatitis B. We

provided hepatitis B education to hundreds of Asian Indians at the Hindu Community and Culture Center and temples in Northern California.

FREE HEPATITIS C TESTING FOR AT-RISK GROUPS



800 at-risk people were offered free hepatitis C test at community outreach events. Patients

tested positive were referred for further evaluation and follow-up. Participants received education on “test and treat” for hepatitis C.

MARTIAL ARTS-BOBA JOINJADE



ALC interns and volunteers collaborated with collegiate martial arts teams and

boba and milk tea shop, MLKY at Newpark Mall to promote joinjade to increase hepatitis B and liver cancer awareness.

CHINESE NEW YEAR CELEBRATION IN SF



Each year, ALC interns and volunteers participate in the 2 days Chinese New

Year Street fair in San Francisco Chinatown to educate the public about hepatitis B prevention through games and quizzes.

TSAI CHIN CONCERT



World-renowned singer Tsai Chin mother's day charity concerts

raised hundreds of thousands of dollars for Northern California cancer support groups including \$125,000 for our programs.

AMBASSADORS SING THE B'S AWAY



6 JoinJade Youth Ambassadors received our support to implement hepatitis B

awareness activities. Most Innovative Project winners Vivien Su and Trevor Chen performed their original song “Bye Bye Hep B” at Stanford!

COLLEGIATE CHAPTERS CONFERENCE AT HARVARD



Over 30 international Team HBV collegiate members gathered at Harvard University for team-bonding events, policy advocacy workshops and a policy outreach hackathon.

17TH ANNUAL YOUTH LEADERSHIP CONFERENCE



100 high school students became change-makers through leadership lessons and development of health advocacy strategies in the 4-day conference.

THANK YOU



Jade Sponsors (\$100,000+)



Chinese Cancer Memorial Foundation
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Dr. C.J. & Ha Lin Yip Huang
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Online: med.stanford.edu/liver/home/donate

To learn more about our programs:

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