CRITICAL LINK

MARYLAND

John M. Colmers
Secretary

A Publication of the Maryland Department of Health and Mental Hygiene

The Laboratories Administration—Maryland's State Public Health Laboratory

Public Health and Laboratories in China

Views of a Maryland Scientist

In July 2010, the Shanghai Veterinary Research Institute (SHVRI) of the Chinese Academy of Agricultural Sciences (CAAS) offered support and submitted a formal invitation to the Laboratories Administration to have Jafar Razeq, PhD, Chief of the Laboratories Administration's Microbiology Division, and Jack DeBoy, Dr.P.H, Administration Director, visit the Institute and initiate discussions of possible scientific collaborations between the Institute and the Laboratories Administration. This invitation was subsequently expanded to include visits to the Shanghai Centers for Disease Control and Prevention and to the Guangjirgang Municipal Centers for Disease Control and Prevention.

Administrative Background

The People's Republic of China (PRC) administers 22 provinces, five autonomous regions (Inner Mongolia, Guangxi, Tibet, Ningxia, and Xinjiang), four municipalities (Beijing, Tianjin, Shanghai, and Chongqing), and two special administrative regions (Hong Kong and Macau). These 33 province-level regions can be further divided into over 300 prefecture-level regions, nearly 3,000 county-level regions, over 40,000 township-level regions, and many more village-level regions. Each level corresponds to a level in the PRC civil service. Approximately half of China's 1.4 billion citizens currently reside in rural areas.

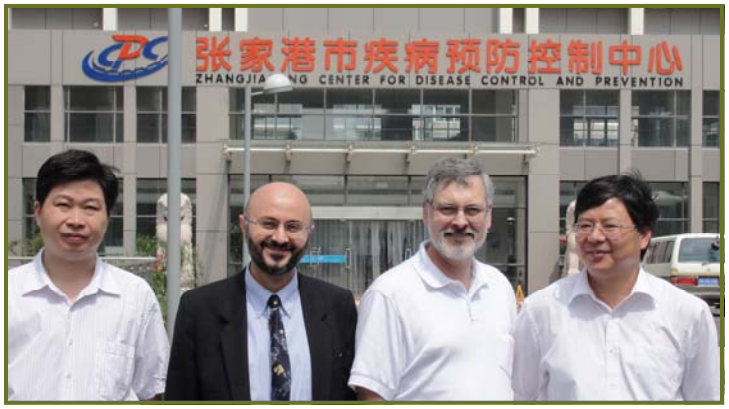

Photo 1: left to right; Dr. Xuan Zhang, Director of Ministry of Health, Zhangjiagang City, Dr. Jafar Razeq, Chief, Division of Public Health Microbiology, Dr. Jack DeBoy, Director, Laboratories Administration, Dr. Xinfeng Chen, Director of the Laboratory.

Provinces are theoretically subservient to the PRC central government, but in practice provincial officials, while they may be partially dependent on central government funding, have much discretion with respect to economic policy. Unlike in the United States, the power of the central government, except in military and foreign matters, is not routinely exercised. Some economists view the practical power of the provinces as a sort of Chinese federalism. Provinces continue to serve an important cultural role in China. People are often identified with their native province, and each province has a stereotype that corresponds to its people.

Public Health Background

With the establishment of the PRC in 1949, the Ministry of Public Health emphasized public health and preventive treatment. Health care was provided in rural and urban areas through a three-tiered system.

In rural China, the first tier consisted of preventive and primary-care services provided by barefoot doctors working

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Questions concerning
technical content of this newsletter
may be referred to
Dr. Jack DeBoy at 410-767-6100

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201 W. Preston Street
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(Phone 410-767-6909)

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out of village medical centers. The second tier consisted of township health centers that had ten to thirty beds and functioned primarily as out-patient clinics. These two tiers made up the rural collective health system and provided most of the country's medical care. Seriously ill patients were referred to the third tier, the county hospitals, staffed by senior doctors with degrees from five-year medical schools.

Health care in urban areas was provided by paramedical personnel assigned to factories and neighborhood health stations. Patients requiring more care were sent to district hospitals, with most serious cases referred to municipal hospitals.

Throughout the 1950's health campaigns were carried out to improve water quality and human waste treatment. As a result, such epidemic diseases as cholera, bubonic plague, typhoid fever, and scarlet fever were nearly eradicated. A mass mobilization proved equally successful against syphilis. However, political turmoil and famine followed the failure of the Great Leap Forward; and the Cultural Revolution that followed a few years later greatly weakened epidemic control.

By the mid-1980's changing economic policies and fortunes led to the demise of the barefoot doctor system. It lost its base and funding with the disappearance of the peoples' communes. The decollectivization of agriculture led to decreased desire of rural populations to support the collective welfare system. This resulted in fewer financial resources to support the system, and many barefoot doctors either went into fee-for-service private practice or found farming to be more lucrative than their salaried positions. As many of the cooperative medical programs collapsed, health education and primary care suffered, sanitation and water supplies were checked less frequently, and, as the cost of medical treatment increased, more financial responsibility fell on the hospitals, leaving some with large debts.

Despite the decline of the public health care system during the first decade of the reform era, Chinese health improved greatly as a result of much improved nutrition, especially in rural areas, and the recovery of the epidemic control system. This author noticed improvements to the lives of rural farmers as his trains passed through the countryside. Everywhere, he saw hundreds of abandoned old-style, concrete, two-story barracks-like buildings, built to house collectivized farmers and their families. In their place, he saw that many, if not most, farmers now lived in single-family homes close to the land they farm.

In 2005, China overhauled its health care system to make it more affordable for the rural poor by implementing The New Rural Co-operative Medical Care System. The annual medical cost per person is quite reasonable ($7 in 2005), with 40% paid by the central government, 40% paid by the provincial government, and 20% paid by the patient. By the end of 2007, nearly 80% of China's rural population had signed up. The new system is also tiered. If patients go to a small hospital or clinic in their local town, the system covers 70-80% of their bill. With a visit to a county clinic, the cost covered falls to about 60%. If a patient requires a specialist in a modern city hospital, the plan covers around 30% of the bill.

In November 2002, China saw the first case of severe acute respiratory syndrome (SARS). By early summer 2003, when the SARS epidemic was over, 66% of the 8,000 cases that occurred worldwide, and 349 deaths, occurred in China. The SARS outbreak immediately showed the decline of the PRC epidemic reporting system and the results of secrecy in health matters. Despite the initial suppression of news on the epidemic, the PRC central government's ability to effect massive mobilization of resources soon contained the outbreak. This health emergency soon led the central government to allot billions of dollars to rebuild and expand its public health infrastructure. A strengthening of the public health surveillance system has proven most valuable in helping China contain more recent outbreaks of avian influenza,

pig-human transmission of *Streptococcus suis* in 2005, and H1N1 influenza in 2009. At the same time, beginning in 2002, a program was implemented to vaccinate all newborns against hepatitis B virus, as at that time about 10% of the population contracted the disease.

Emerging Public Health Issues

Today, as in developed western countries, communicable disease outbreaks in China are rare and only a small proportion of the population dies from them. However, even with massive inflow of yuan into public health, the PRC has a number of emerging public health problems. These include environmental pollution, food and drug safety, human immunodeficiency virus (HIV) infections, gonorrhea, tuberculosis, cigarette smoking, obesity, and industrial injuries. Considering the cultural conservatism in China, the author was surprised to find that every hotel room came equipped with free condoms as well as tea, coffee, and bottled water.

Everyone in the metropolitan areas of China, tourists and citizens alike, use bottled or boiled water for drinking and tooth brushing. In the cities, this is due to the large range and number of bacteria in municipal water systems. While much municipal infrastructure (roads, expressways, buildings) is new, parts of water systems are very old and have many sources of back-flushing and other sources of contamination that modern water treatment cannot resolve. However, the tap water is still safe for hand washing and showering, and within only a couple days the author did not find this a major inconvenience. Bottled water is everywhere in China and an 8-ounce bottle often cost less than fifty cents. The responsibility for municipal water supply falls partly under the Ministry of Public Health and partly under the Ministry of Environmental Protection.

Photo 2: The Shanghai Veterinary Research Institute, a part of the Chinese Academy of Agricultural Sciences.

Approximately half of China's 1.4 billion people now live in urban and suburban areas where jobs are more plentiful and salaries are higher. This means there continues to be a massive population shift from rural areas to the cities. Each city keeps track of its total population by adding the number of its legal residents to that of its "floating population." A city's floating population consists of Chinese who have migrated to a city without first obtaining government approval. While these citizens are not prevented from finding jobs and settling in the cities, they are still shown on government rolls as being residents of the village or district in which they were born or raised. Members of an urban area's floating population cannot access government subsidies or programs such as those for medical and dental health. This has led to tremendous growth in the fee-for-medical and dental services, and a significant portion of city dwellers, both floaters and the better off, now rely on the private medical sector rather than the tiered system of public medical care.

SHVRI and CAAS

The Chinese Academy of Agricultural Sciences (CAAS), founded in 1957, currently consists of 39 research institutes, 17 in Beijing and 22 located across China. It is the largest of China's agricultural research institutions undertaking agricultural research and development in both basic and applied sciences. The CAAS plays an important role in solving fundamental and strategic technological issues in Chinese agriculture and rural economic development, training advanced researchers, integrating agriculture with science, and developing science technology exchanges and collaborations. The Graduate School of the CAAS, founded in 1979, was approved by the State Council of China in 1981 as one of the earliest institutions to confer MS and PhD degrees. Today it offers 44 PhD programs and eight postdoctoral programs.

The Maryland Laboratories Administration first learned of the Shanghai Veterinary Research Institute (SHVRI), one of the 39 CAAS research institutes, through Chengru Zhu, PhD, Chief of the Laboratories Administration's Environmental Microbiology Division. Dr. Zhu, who obtained his degree in veterinary medicine in China, has a close relationship with the SHVRI Director in General, and has visited the Institute several times as a visiting researcher and lecturer. In the spring of 2009, Dr. Zhu was instrumental in suggesting to the Director, Guang-Zhi Tong, that he recommend a postdoctoral fellow at the SHVRI to apply for a one-year Emerging Infectious Disease (EID) Fellowship sponsored by the United States' Centers for Disease Control and

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Photo 3: The meeting at the the Shanghai Veterinary Research Institute. From left: Dr. Zhiyong Ma, Professor, SHVRI, CAAS; Dr. Jack DeBoy; Dr. Guang-Zhi Tong, Director, SHVRI, CAAS; Dr. Jafar Razeq.

Photo 4: Initial greetings from the staff at the Shanghai CDC. From left: Dr. Jafar Razeq; Dr. Yuan Zheng'an, Deputy Director, Shanghai CDC; Dr. Zhang Xi, Director of the Department of Microbiology; an unnamed staff member; Dr. Sophia Song, Office of International Cooperation; Dr. Jack DeBoy.

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Prevention (CDC), and the Association of Public Health Laboratories. The SHVRI fellow who applied, Xinzhi Wang, PhD, won one of the six fellowship slots for foreign trainees and chose to carry out her fellowship in the Public Health Microbiology Division of the Laboratories Administration under Dr. Jafar Razeq. Dr. Wang spent September 2009 through July 2010 working on applied research projects and rotating through several public health microbiology sections.

In Shanghai, on September 14, Drs. DeBoy and Razeq, along with Dr. Wang, met with SHVRI staff to present two lectures, begin a discussion of possible collaborations, take a brief tour of the Institute's new laboratory, and to join them for lunch. The SHVRI consists of six departments and one center. Those available for possible collaboration include the Department of Avian Infectious Diseases, the Department of Veterinary Public Health, and the Animal-borne Food Safety Research Center. Areas of possible collaboration include outbreak surveillance using pulse field gel electrophoresis, zoonotic bacterial and viral diseases, diagnostic techniques, and animal food safety science and training.

The Shanghai CDC

The next afternoon, September 15, Drs. Razeq, DeBoy, and Wang visited with the staff of the Shanghai Municipal Centers for Disease Control and Prevention (Shanghai CDC). Establishment of the Shanghai CDC in 1998 marked a significant step forward in improving public health in China. The Shanghai CDC, which was based on the example of the United States' CDC in Atlanta, was the first such center to be established in China. As a model program, it was the precursor to China's Center for Disease Control and Prevention (China CDC) that was created in Beijing in January 2002. There are now similar entities throughout the province-level regions of China.

The creation of these centers coincided with a major decision in PRC policy in 2000 to shift from the Soviet to the U.S. model for disease control and prevention. Its strength is the emphasis on prevention, accompanied by the skillful use of epidemiology and laboratory science. Prior to 1998, public health in China was under the responsibility of dozens of different institutes, centers, agencies, bureaus and departments, organized around individual diseases or clusters of traditional disease categories.

Shanghai is one of four municipalities that have an independent governmental structure and report directly to the central Chinese government. It is divided into 18 districts and one county. Shanghai has a total population of 21 million (14 million permanent residents and 7 million floaters). In a city where people are now expected to live to more than 80 years of age, 21% of its population is over age 60. Not only are people living longer but also are facing the same health problems as in other developed nations. For example, 92% of deaths in Shanghai are cancer, or circulatory or respiratory in nature. The tremendous economic growth and related construction has also resulted in 6.6% of deaths due to injuries.

Public Health in Shanghai includes the Shanghai CDC, the Shanghai Municipal Health Bureau, district and county health departments, hospitals, medical universities, and research institutes (such as the SHVRI). The Shanghai CDC carries out its functions through five core departments: 1) Control and Prevention of Infectious Diseases; 2) Control and Prevention of Chronic Diseases; 3) Environmental and Occupational Health; 4) Preventive Health Care Service; and 5) Public Health Laboratory. It partners with various hospitals and medical universities for clinical research, and with academic associations, experts, and volunteers in all health fields. At the international level it collaborates with many different organizations including the World Health Organization, agencies of the World Bank and United Nations, the European Union, the U.S. CDC, the U.S. NIH, the State of California Department of Health, and the University of Toronto.

Beginning in 2005, the U.S. CDC collaborated with China to integrate elements of U.S. CDC's training in quality management systems into the Chinese network of public health laboratories.

After Drs. Razeq and DeBoy and two Shanghai CDC staff gave their formal presentations, the staff of the Shanghai CDC proposed a number of possible areas of collaboration with the Maryland Laboratories Administration. These ranged from multi-drug resistant tuberculosis testing, Campylobacter

studies, and detection of diarrheal viruses to quality assurance in microbiology, training in biosafety-level 3 operations, jointly applying for grants, exchanging staff, and holding a joint workshop in 2011. The Shanghai CDC is also about to undertake the planning for a new central public health laboratory and is eager to learn from Maryland's experience in planning and constructing its new public health laboratory.

Zhangjiagang CDC

The city of Zhangjiagang is located in the Yangtze River delta about 100 kilometers northeast of Shanghai. It consists of 999 square kilometers with 176 kilometers of waterfront and inland waterways. It has a population of 1.5 million (900,000 legal residents and 600,000 floating residents) located within eight towns and one district.

The Zhangjiagang Municipal Centers for Disease Control and Prevention, established in 2002, includes 14 divisions and 222 health stations. The Municipal CDC is located in a new $20-million central health center. Visiting the Zhangjiagang Municipal CDC provided an opportunity to see and possibly consider a collaboration with what might be considered, by Chinese standards, a small modern city or county health department. On September 16, in Zhangjiagang, Drs. DeBoy and Razeq again made formal presentations, discussed possible collaborations, and were once more treated, with staff, to a large, hot lunch consisting of over a dozen entrees. Staff at the Zhangjiagang Municipal CDC were most interested in a possible exchange of laboratory scientists and in training involving infectious disease laboratory quality assurance.

Personal Comments

As someone who just spent two weeks visiting the PRC for the first time, the author came home with a wide range of new knowledge and insights about China. For one, the people are extremely friendly, go out of their way to help visitors, and are very hard working. In the major cities visited (Shanghai, Beijing, and Xi'An), construction cranes were everywhere and construction went on 24/7. The cities were exceptionally clean (no trash in the streets) and everywhere the local governments saw that parks and green spaces were maintained. New streets and express-ways were everywhere and cities had the same morning and evening traffic rushes and jams as in the U.S. However, China places more emphasis than the U.S. on having trees and other plantings placed along its highways. The author also was able to take comfortable overnight trains from city to city, and each train left and arrived on time.

While the author was already aware of massive spending in recent years on public health and infrastructure, it still came as a pleasant surprise to see that the CAAS Institute and municipal CDC's visited had new complexes of administrative buildings and laboratory facilities. In some cases these new complexes were built in newly developed districts that, only five years earlier, were still rural farmlands. It was also interesting to learn that institute and public health laboratorians in China work from 8:00-11:00 a.m., get a three-hour break, and return for work from 2:00-5:00 p.m.

Photo 5: Dr. Jack DeBoy presents Dr. Xuan Zhang with a copy of a book about Baltimore. Dr. Zhang is the Director of the Regional Public Health Institute of Zhangjiagang City.

The author also felt very safe walking through the many streets, and taking subways and buses in the cities he visited. Police officers, while numerous in the cities, especially in facilitating the flow of traffic, carry no weapons. The author also noticed that the Chinese are not adverse to getting into loud arguments over what may appear to be minor issues. However, these disturbances were all settled, or the arguers wore one another out, without the police becoming involved, even when they were aware of the disturbance.

Another personal perception is that the Chinese people, at least those in metropolitan areas, appear to have much more disposable income than the central government's economists might lead us to believe. A new shopping mall in Xi'An was complete with a large U.S.-style grocery store, selling everything from sundries to baked goods and pre-packaged dinners for families too tired from working to prepare a nightly family meal. Along the major shopping streets of Beijing and Shanghai, one finds every type of expensive, name-brand clothing, jewelry, and department store found in Europe and America. America has also made inroads in the major cities. It seemed like a McDonalds, Pizza Hut, Kentucky Fried Chicken, or Starbucks was located on nearly every city block and shopping center. The foods sold in these restaurants are not quite the same as in the U.S. They have a definite Chinese design or flavor.

Summation

This writer believes the PRC is, and will remain for a long time to come, one of the most dynamic countries and populations in the world. China is laying a broad and solid base for future growth in the social, basic, and applied sciences not only through the strength of its many technical universities but also by its centralized budgeting on such important items as infrastructure and public health. Through this recent visit to China, Maryland's Laboratories Administration

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now has an opportunity to collaborate with several Chinese public health institutions and should strive to do so. The Administration is currently exchanging e-mails with its Chinese counterparts to narrow down the lists of possible collaborations to those likely to prove both feasible and most productive for each partner.

This article compiled and written by Jack DeBoy, DrPH

Laboratory Statistics

Reported by the
Laboratories Administration
covering results from the month of
September 2010

ENTERIC BACTERIOLOGY

SEX	AGE	#	JURISDICTION
GENUS SEROVAR			
CAMPYLOBACTER JEJUNI			
M	0	1	ALLEGANY
U	59	1	ANNE ARUNDEL
F	93	1	ANNE ARUNDEL
F	56	1	ANNE ARUNDEL
M	83	1	ANNE ARUNDEL
U	0	1	BALTIMORE
U	7	1	BALTIMORE
F	0	1	BALTIMORE
F	70	1	BALTIMORE
F	51	1	BALTIMORE
F	38	1	BALTIMORE
F	27	2	BALTIMORE
F	21	1	BALTIMORE
F	18	1	BALTIMORE
F	14	1	BALTIMORE
F	1	1	BALTIMORE
M	0	2	BALTIMORE
M	50	1	BALTIMORE
M	47	1	BALTIMORE
M	0	1	BALTIMORE
F	80	1	CARROLL
F	62	1	MONTGOMERY
U	61	1	OUT OF STATE
F	60	1	OUT OF STATE
F	55	1	OUT OF STATE
F	48	1	OUT OF STATE
F	45	1	OUT OF STATE
F	36	1	OUT OF STATE
F	35	1	OUT OF STATE
F	6	1	OUT OF STATE
M	67	1	OUT OF STATE
M	49	1	OUT OF STATE
M	47	1	OUT OF STATE
M	32	1	OUT OF STATE
M	30	1	OUT OF STATE
M	27	2	OUT OF STATE
M	22	1	OUT OF STATE
M	18	1	OUT OF STATE
M	13	1	OUT OF STATE
M	3	1	OUT OF STATE
M	3	1	OUT OF STATE
F	67	1	TALBOT
CAMPYLOBACTER UPSALIENSIS			
F	46	1	OUT OF STATE
ESCHERICHIA COLI, SEROTYPE O103:H2			
F	21	1	BALTIMORE CITY
M	3	1	OUT OF STATE
F	35	1	OUT OF STATE
ESCHERICHIA COLI, SEROTYPE O157:H7			
U	16	1	BALTIMORE CITY
F	1	1	WASHINGTON
M	12	1	WASHINGTON
M	1	1	WASHINGTON
ESCHERICHIA COLI, SEROTYPE O26:H11			
M	15	1	OUT OF STATE
F	3	1	OUT OF STATE
M	2	1	OUT OF STATE
SALMONELLA			
F	0	1	BALTIMORE
F	61	1	BALTIMORE
M	46	1	BALTIMORE
M	2	1	BALTIMORE
F	0	1	BALTIMORE CITY
F	43	1	BALTIMORE CITY
F	19	1	BALTIMORE CITY
F	0	1	BALTIMORE CITY
M	41	1	BALTIMORE CITY
F	15	1	CALVERT
F	24	1	CECIL
M	6	1	CHARLES
F	27	1	KENT
F	22	1	OUT OF STATE
M	53	2	OUT OF STATE
U	28	1	PRINCE GEORGE'S
U	6	1	PRINCE GEORGE'S
F	54	1	PRINCE GEORGE'S
M	40	1	WASHINGTON
SALMONELLA SER. 4,5,12:I:-			
F	67	1	OUT OF STATE
M	2	1	PRINCE GEORGE'S
SALMONELLA SER. AGONA			
M	0	1	BALTIMORE
SALMONELLA SER. BAREILLY			
U	47	1	CECIL
M	0	1	TALBOT
SALMONELLA SER. BERTA			
F	26	1	BALTIMORE CITY
M	13	1	MONTGOMERY
F	28	1	OUT OF STATE
F	18	1	OUT OF STATE
SALMONELLA SER. ENTERITIDIS			
F	38	1	ANNE ARUNDEL
M	71	1	ANNE ARUNDEL
M	20	1	ANNE ARUNDEL
F	0	1	BALTIMORE
F	4	1	BALTIMORE
M	37	1	BALTIMORE
M	22	1	BALTIMORE
M	18	1	BALTIMORE
U	90	1	BALTIMORE CITY
U	25	1	BALTIMORE CITY
F	0	1	BALTIMORE CITY
F	71	1	BALTIMORE CITY
F	57	1	BALTIMORE CITY
F	52	1	BALTIMORE CITY
F	50	1	BALTIMORE CITY
F	49	1	BALTIMORE CITY
F	46	1	BALTIMORE CITY
F	41	1	BALTIMORE CITY
F	22	1	BALTIMORE CITY
F	16	1	BALTIMORE CITY
F	11	1	BALTIMORE CITY
F	0	2	BALTIMORE CITY
F	0	1	BALTIMORE CITY
M	85	1	BALTIMORE CITY
M	53	1	BALTIMORE CITY
M	46	1	BALTIMORE CITY
M	26	1	BALTIMORE CITY
M	22	1	BALTIMORE CITY
M	19	1	BALTIMORE CITY
M	1	1	BALTIMORE CITY
M	1	1	BALTIMORE CITY
F	44	1	FREDERICK
M	33	1	FREDERICK
F	24	1	MONTGOMERY
M	31	1	MONTGOMERY
M	18	1	MONTGOMERY
U	42	1	OUT OF STATE
F	0	1	OUT OF STATE
F	55	1	OUT OF STATE
F	50	1	OUT OF STATE
F	41	1	OUT OF STATE
F	25	1	OUT OF STATE
F	24	1	OUT OF STATE
F	21	1	OUT OF STATE
F	19	1	OUT OF STATE
F	12	1	OUT OF STATE
F	2	1	OUT OF STATE
M	49	1	OUT OF STATE
M	36	1	OUT OF STATE
M	26	1	OUT OF STATE
M	24	1	OUT OF STATE
M	13	1	OUT OF STATE
M	2	1	OUT OF STATE
M	0	1	UNKNOWN
U	21	1	WICOMICO
F	54	1	WICOMICO
M	0	1	WICOMICO
SALMONELLA SER. HEIDELBERG			
M	86	1	BALTIMORE
M	19	1	OUT OF STATE
F	1	1	OUT OF STATE
SALMONELLA SER. INFANTIS			
U	25	1	WASHINGTON

SALMONELLA SER. JAVIANA

F	1	1	BALTIMORE CITY
F	0	1	OUT OF STATE
F	28	1	OUT OF STATE
M	43	1	OUT OF STATE
M	6	1	OUT OF STATE
M	2	1	OUT OF STATE
F	5	1	WICOMICO
M	3	1	WICOMICO
U	3	1	WORCESTER
M	3	8	WORCESTER
M	2	2	WORCESTER
M	1	8	WORCESTER

SALMONELLA SER. KENTUCKY

U	0	1	BALTIMORE

SALMONELLA SER. LITCHFIELD

F	52	1	BALTIMORE CITY

SALMONELLA SER. LONDON

F	81	1	BALTIMORE

SALMONELLA SER. MADELIA

F	87	1	MONTGOMERY

SALMONELLA SER. MUENCHEN

F	81	1	BALTIMORE

SALMONELLA SER. NEWPORT

F	67	1	ANNE ARUNDEL
F	20	1	ANNE ARUNDEL
F	42	1	BALTIMORE
F	31	1	BALTIMORE
F	30	1	BALTIMORE
F	18	1	BALTIMORE
M	28	1	BALTIMORE
M	4	1	BALTIMORE
F	3	1	BALTIMORE CITY
F	69	1	FREDERICK
M	1	1	KENT
F	1	1	MONTGOMERY
M	0	1	MONTGOMERY
M	32	1	MONTGOMERY
F	0	1	OUT OF STATE
F	96	1	OUT OF STATE
F	78	1	OUT OF STATE
F	65	1	OUT OF STATE
F	48	1	OUT OF STATE
M	69	1	OUT OF STATE
M	51	1	OUT OF STATE
M	25	1	OUT OF STATE
M	70	1	PRINCE GEORGE'S
F	27	5	SOMERSET
M	0	1	SOMERSET
F	45	1	TALBOT
F	71	1	WICOMICO
F	56	1	WICOMICO
M	59	1	WICOMICO
M	57	1	WICOMICO
M	0	1	WICOMICO

SALMONELLA SER. NITRA

M	54	1	BALTIMORE CITY
F	2	1	BALTIMORE CITY

SALMONELLA SER. ORANIENBURG

F	67	1	OUT OF STATE
F	2	1	OUT OF STATE
M	7	1	UNKNOWN

SALMONELLA SER. PARATYPHI A

M	19	1	MONTGOMERY

SALMONELLA SER. PARATYPHI B

F	44	1	OUT OF STATE
F	22	1	OUT OF STATE

SALMONELLA SER. POMONA

F	87	1	MONTGOMERY

SALMONELLA SER. SAINTPAUL

M	7	1	BALTIMORE
F	84	1	WICOMICO

SALMONELLA SER. TYPHI

F	17	1	OUT OF STATE

SALMONELLA SER. TYPHIMURIUM

U	0	1	BALTIMORE
U	12	1	BALTIMORE
F	71	1	BALTIMORE
F	70	1	BALTIMORE
F	14	1	BALTIMORE
M	10	1	BALTIMORE
M	9	1	BALTIMORE
U	0	1	BALTIMORE CITY
F	54	1	BALTIMORE CITY
M	13	1	BALTIMORE CITY
U	6	1	BALTIMORE CITY
M	0	1	CARROLL
F	71	1	OUT OF STATE
F	1	1	OUT OF STATE
M	24	1	OUT OF STATE
U	0	1	PRINCE GEORGE'S
M	62	1	TALBOT
U	0	1	WICOMICO

SALMONELLA, SEROGROUP I

F	81	1	BALTIMORE

SHIGELLA FLEXNERI

M	0	2	BALTIMORE CITY
F	21	1	OUT OF STATE
M	0	1	UNKNOWN

SHIGELLA FLEXNERI II:3,4

M	35	1	BALTIMORE CITY

SHIGELLA SONNEI

F	5	1	BALTIMORE
M	24	1	BALTIMORE CITY
F	57	1	OUT OF STATE
F	22	1	OUT OF STATE
M	10	1	OUT OF STATE
M	65	1	OUT OF STATE
F	30	1	OUT OF STATE

VIBRIO FLUVIALIS

M	70	1	BALTIMORE CITY

VIBRIO MIMICUS

M	52	1	MONTGOMERY

VIBRIO PARAHAEMOLYTICUS

M	67	1	BALTIMORE
M	65	1	BALTIMORE CITY
F	66	1	OUT OF STATE
F	65	1	WICOMICO

VIBRIO VULNIFICUS

M	74	1	ANNE ARUNDEL
M	53	1	ANNE ARUNDEL
M	74	1	BALTIMORE CITY
F	49	1	OUT OF STATE
M	32	1	OUT OF STATE

TOTAL 268

ISOLATES - REFERENCE

GENUS SPECIES

SOURCE	#	JURISDICTION

ACINETOBACTER LWOFFI

ARM	1	ALLEGANY

ACTINOMYCES GEORGIAE

BLOOD	1	ALLEGANY

The services and facilities of the Maryland Department of Health and Mental Hygiene (DHMH) are operated on a non-discriminatory basis. This policy prohibits discrimination on the basis of age; ancestry; color; creed; marital status; mental or physical disability; national origin; race; religious affiliation, belief, or opinion; sex; or sexual orientation and plies to the provisions of employment and granting of advantages, privileges and accommodations.

The Department, in compliance with the Americans with Disabilities Act, ensures that qualified individuals with disabilities are given an opportunity to participate in and benefit from DHMH services, programs, benefits, and employment opportunities.

ACTINOMYCES NAESLUNDII

ABSCESS	1	ALLEGANY

AUREOBACTERIUM SPECIES

BLOOD	1	ALLEGANY

BACILLUS CEREUS

BLOOD	1	ANNE ARUNDEL
BLOOD	1	BALTIMORE CITY

BACILLUS MEGATERIUM

BLOOD	1	BALTIMORE CITY

BACILLUS THERMODENITRIFICANS

EYE	1	BALTIMORE CITY

BREVIBACTERIUM EPIDERMIDIS

FOOT	1	ALLEGANY

BREVIBACTERIUM SPECIES

SHOULDER	1	ALLEGANY

CORYNEBACTERIUM STRIATUM

BLOOD	1	ALLEGANY

ENTEROBACTER AEROGENES

OTHER	1	CARROLL

ENTEROBACTER CLOACAE

URINE	1	CARROLL

ENTEROCOCCUS FAECALIS

RECTAL	1	WICOMICO

HAEMOPHILUS PARAINFLUENZE, BIOTYPE I

ABSCESS	1	ALLEGANY

LACTOBACILLUS ACIDOPHILUS

SINUS	1	ALLEGANY

MOBILUNCUS MULIERIS

OTHER	1	ALLEGANY

PLESIOMONAS SHIGELLOIDES

STOOL	1	PRINCE GEORGE'S

ROTHIA DENTICARIOSA

SPUTUM	1	PRINCE GEORGE'S

SPHINGOBACTERIUM MULTIVORUM

BLOOD	1	ANNE ARUNDEL

STAPHYLOCOCCUS AUREUS		
URINE	1	BALTIMORE
BLOOD	1	BALTIMORE CITY
BLOOD	1	PRINCE GEORGE'S
STREPTOCOCCUS AGALACTIAE, GROUP B		
BONE	1	BALTIMORE
STREPTOCOCCUS EQUINUS		
URINE	1	WICOMICO
TOTAL	**25**	

ISOLATES - MISCELLANEOUS

GENUS SPECIES / SOURCE	#	JURISDICTION
ACHROMOBACTER XYLOSOXIDANS		
SPUTUM	1	WASHINGTON
BACILLUS CEREUS		
BLOOD	1	BALTIMORE CITY
VAGINAL	1	MONTGOMERY
VAGINAL	4	PRINCE GEORGE'S
VAGINAL	7	PRINCE GEORGE'S
VAGINAL	1	SOMERSET
CDC CORYNEBACTERIUM GROUP		
BLOOD	1	BALTIMORE CITY
CITROBACTER KOSERI		
BLOOD	1	BALTIMORE CITY
CLOSTRIDIUM BUTYRICUM		
BLOOD	2	BALTIMORE CITY
ENTEROBACTER CLOACAE		
ABDOMIN	1	BALTIMORE CITY
ENTEROCOCCUS FAECIUM		
BLOOD	1	BALTIMORE CITY
ESCHERICHIA COLI		
BLOOD	1	BALTIMORE CITY
CSF	2	BALTIMORE CITY
ABSCESS	1	CARROLL
VAGINAL	1	MONTGOMERY
GARDNERELLA VAGINALIS		
VAGINAL	4	PRINCE GEORGE'S
GRAM-NEGATIVE BACILLUS		
BLOOD	1	BALTIMORE CITY
KLEBSIELLA OXYTOCA		
BLOOD	2	BALTIMORE CITY
STAPHYLOCOCCUS AUREUS		
WOUND	1	BALTIMORE
BLOOD	1	BALTIMORE CITY
CSF	1	BALTIMORE CITY
WOUND	1	BALTIMORE CITY
WOUND	1	CARROLL
WOUND	1	PRINCE GEORGE'S
VULVA	1	TALBOT
STAPHYLOCOCCUS, COAGULASE NEGATIVE		
BLOOD	1	BALTIMORE CITY
CSF	1	BALTIMORE CITY
WOUND	1	BALTIMORE CITY
WOUND	1	PRINCE GEORGE'S
STREPTOCOCCUS, BETA HEMOLYTIC		
BLOOD	1	BALTIMORE CITY
STREPTOCOCCUS, BETA HEMOLYTIC, NON-GROUP A		
THROAT	19	ALLEGANY
STREPTOCOCCUS, BETA HEMOLYTIC, GROUP B		
VAGINAL	4	ANNE ARUNDEL
WOUND	2	BALTIMORE CITY
STREPTOCOCCUS, VIRIDANS GROUP		
BLOOD	1	BALTIMORE CITY
TOTAL	**71**	

PENICILLIN-RESISTANT GONORRHEA

REPORTED QUARTERLY 7-01-10 TO 10-31-10

SEX	AGE	#	JURISDICTION
F	18	1	ANNE ARUNDEL
F	16	1	PRINCE GEORGE'S
F	16	1	PRINCE GEORGE'S
F	17	1	PRINCE GEORGE'S
M	19	1	PRINCE GEORGE'S
TOTAL		**5**	

SEXUALLY TRANSMITTED DISEASES

GENUS SPECIES / SEX	#	JURISDICTION
SYPHILIS SEROLOGY		
F	1	ALLEGANY
F	1	ANNE ARUNDEL
M	2	ANNE ARUNDEL
F	3	BALTIMORE
M	5	BALTIMORE
F	7	BALTIMORE CITY
M	46	BALTIMORE CITY
U	3	BALTIMORE CITY
F	1	CAROLINE
F	2	CHARLES
M	1	FREDERICK
M	1	HARFORD
M	1	HOWARD
F	6	MONTGOMERY
M	11	MONTGOMERY
F	9	PRINCE GEORGE'S
M	27	PRINCE GEORGE'S
U	2	PRINCE GEORGE'S
M	1	TALBOT
U	1	TALBOT
F	2	WICOMICO
M	1	WICOMICO
TOTAL	**134**	
CHLAMYDIA TRACHOMATIS		
F	7	ALLEGANY
M	1	ALLEGANY
F	22	ANNE ARUNDEL
M	9	ANNE ARUNDEL
U	1	ANNE ARUNDEL
F	15	BALTIMORE
M	16	BALTIMORE
F	9	BALTIMORE CITY
M	18	BALTIMORE CITY
U	2	BALTIMORE CITY
F	4	CALVERT
M	2	CALVERT
F	4	CAROLINE
M	2	CAROLINE
F	2	CARROLL
M	1	CARROLL
F	1	CECIL
M	4	CECIL
F	14	CHARLES
M	5	CHARLES
F	1	DORCHESTER
F	7	FREDERICK
M	4	FREDERICK
F	6	HARFORD
M	3	HARFORD
F	9	HOWARD
M	7	HOWARD
F	3	KENT
F	20	MONTGOMERY
M	2	MONTGOMERY
F	54	PRINCE GEORGE'S
M	62	PRINCE GEORGE'S
F	1	QUEEN ANNE'S
F	5	SAINT MARY'S
M	4	SAINT MARY'S
F	5	SOMERSET
M	2	SOMERSET
F	1	TALBOT
M	2	TALBOT
F	7	WASHINGTON
M	5	WASHINGTON
F	13	WICOMICO
M	12	WICOMICO
F	2	WORCESTER
TOTAL	**376**	
NEISSERIA GONORRHOEAE		
F	1	ANNE ARUNDEL
M	3	BALTIMORE
M	1	BALTIMORE CITY
F	1	CHARLES
M	2	HARFORD
M	1	HOWARD
F	2	MONTGOMERY
M	3	MONTGOMERY
F	11	PRINCE GEORGE'S
M	10	PRINCE GEORGE'S
M	1	SAINT MARY'S
F	2	WICOMICO
M	1	WICOMICO
TOTAL	**39**	

MYCOBACTERIOLOGY

ISOLATE / SEX	AGE	#	JURISDICTION
ACID-FAST BACILLUS			
M	62	1	BALTIMORE CITY
F	38	1	OUT OF STATE
M	41	1	PRINCE GEORGE'S
ACID-FAST BACILLUS			
M	28	1	KENT
AEROBIC ACTINOMYCETE			
M	74	1	BALTIMORE CITY
MYCOBACTERIUM ABSCESSUS			
M	64	1	WICOMICO
MYCOBACTERIUM AFRICANUM			
F	38	1	PRINCE GEORGE'S
MYCOBACTERIUM AVIUM COMPLEX			
F	27	1	ALLEGANY
F	58	1	ALLEGANY
F	24	1	ANNE ARUNDEL
F	59	1	ANNE ARUNDEL

F	78	1	ANNE ARUNDEL
F	83	1	ANNE ARUNDEL
M	68	1	ANNE ARUNDEL
F	53	1	BALTIMORE
F	64	2	BALTIMORE
F	79	1	BALTIMORE
M	35	1	BALTIMORE
M	48	1	BALTIMORE
M	52	2	BALTIMORE
M	71	2	BALTIMORE
F	60	1	BALTIMORE CITY
F	80	1	BALTIMORE CITY
M	29	1	BALTIMORE CITY
M	32	1	BALTIMORE CITY
M	51	1	BALTIMORE CITY
M	61	1	BALTIMORE CITY
F	61	1	CARROLL
F	66	2	HARFORD
F	25	2	MONTGOMERY
M	47	1	MONTGOMERY
F	50	2	OUT OF STATE
M	85	2	OUT OF STATE
F	57	1	PRINCE GEORGE'S
M	21	1	PRINCE GEORGE'S
M	26	1	PRINCE GEORGE'S
F	0	1	WICOMICO
MYCOBACTERIUM FORTUITUM			
M	40	2	BALTIMORE
MYCOBACTERIUM FORTUITUM COMPLEX			
M	77	1	BALTIMORE
M	25	1	FREDERICK
F	77	2	HARFORD
F	77	1	MONTGOMERY
M	52	1	MONTGOMERY
M	28	1	PRINCE GEORGE'S
M	33	1	PRINCE GEORGE'S
M	41	1	PRINCE GEORGE'S
MYCOBACTERIUM GORDONAE			
M	28	1	MONTGOMERY
M	41	1	PRINCE GEORGE'S
M	42	1	TALBOT
M	74	1	WICOMICO
MYCOBACTERIUM KANSASII			
M	50	3	BALTIMORE
MYCOBACTERIUM MARINUM			
M	69	1	CALVERT
MYCOBACTERIUM TUBERCULOSIS			
M	46	1	BALTIMORE
F	46	1	MONTGOMERY
M	37	1	MONTGOMERY
F	40	1	OUT OF STATE
F	37	1	PRINCE GEORGE'S
M	33	1	PRINCE GEORGE'S
M	41	1	PRINCE GEORGE'S
U	0	1	UNKNOWN
MYCOBACTERIUM TUBERCULOSIS COMPLEX			
F	29	1	BALTIMORE
M	46	5	BALTIMORE
F	20	2	BALTIMORE CITY
M	55	1	BALTIMORE CITY
M	44	1	FREDERICK
M	22	4	HARFORD
M	28	2	KENT
F	39	1	OUT OF STATE
F	25	3	PRINCE GEORGE'S
F	37	2	PRINCE GEORGE'S
F	38	1	PRINCE GEORGE'S
M	41	2	PRINCE GEORGE'S
F	38	1	TALBOT
MYCOBACTERIUM, NON-TB			
M	42	1	BALTIMORE
NON-PHOTOCHROMOGENIC MYCOBACTERIA			
F	65	1	BALTIMORE
M	37	1	BALTIMORE
M	75	1	BALTIMORE
RAPIDLY GROWING MYCOBACTERIA			
M	35	1	OUT OF STATE
SCOTOCHROMOGENIC MYCOBACTERIA			
F	67	2	WICOMICO
TOTAL		**101**	

MYCOBACTERIUM SUSCEPTIBILITY RESULTS

17 ISOLATES IDENTIFIED
2 DRUG RESISTANT STRAINS FOUND

#	JURISDICTION	DRUG(S)
1[C]	WASHINGTON DC	ISONIAZID PYRAZINAMIDE STREPTOMYCIN RIFAMPIN RIFABUTIN ETHIONAMIDE
1	WASHINGTON DC	ISONIAZID

[A] TWO ISOLATES FROM THE SAME PATIENT
[B] PROBABLE FOR M. BOVIS
[C] MEETS CASE DEFINITION OF MULTI-DRUG TUBERCULOSIS (MDRTB)

Mycobacterium tuberculosis complex consists of:

M. tuberculosis	*M. africanum*
M. bovis	*M. microti*
M. bovis, BCG	*M. canettii*

PARASITOLOGY

GENUS/SPECIES	#	JURISDICTION
BLASTOCYSTIS HOMINIS		
	1	HOWARD
ENDOLIMAX NANA		
	1	MONTGOMERY
	1	HOWARD
	2	PRINCE GEORGE'S
	3	MONTGOMERY
	1	BALTIMORE CITY
	1	PRINCE GEORGE'S
ENTAMOEBA COLI		
	3	HOWARD
ENTAMOEBA HARTMANNI		
	1	BALTIMORE CITY
	1	PRINCE GEORGE'S
	1	SAINT MARY'S
ENTEROBIUS VERMICULARIS		
	1	ANNE ARUNDEL
	1	FREDERICK
	1	HOWARD
GIARDIA LAMBLIA		
	3	MONTGOMERY
IODAMOEBA BÜTSCHLII		
	1	BALTIMORE CITY
PLASMODIUM FALCIPARUM		
	1	MONTGOMERY
	1	BALTIMORE CITY
	1	MONTGOMERY
TRICHURIS TRICHIURA		
	1	MONTGOMERY
TOTAL	**27**	

WATER MICROBIOLOGY

	# TESTED	# NON-COMPLIANT
COMMUNITY	1	0
NON-COMMUNITY	419	128
TOTAL	**420**	**128**

FOOD PROTECTION

	TOTALS
FOOD	
NUMBER OF SAMPLES	41
NOTABLE PATHOGENS:	
CAMPYLOBACTER SP.	5
ENTEROCOCCUS	17
E. COLI	11
VRE	3
CRABMEAT	
NUMBER OF SAMPLES	0
EXCEEDING STANDARDS[1]	0
SHELLFISH	
NUMBER OF SAMPLES	0
EXCEEDING STANDARDS[2]	0
TOTAL STANDARDS EXCEEDED	0
SHELLFISH GROWING WATERS	
NUMBER OF SAMPLES	206
TOTAL NUMBER OF SAMPLES	247

STANDARDS

[1]CRABMEAT FRESH

ESCHERICHIA COLI AT < 36 MPN/100 GRAMS
STANDARD PLATE COUNT AT < 100

[2]SHELLFISH

FECAL COLIFORMS AT < 230 MPN/100 GRAMS
STANDARD PLATE COUNT AT < 500,000 PER GRAM

VIRUS ISOLATION

ISOLATE	SEX	AGE	#	JURISDICTION
HERPES SIMPLEX VIRUS TYPE 1				
	M	43	1	MONTGOMERY
	M	44	1	BALTIMORE CITY
INFLUENZA A VIRUS				
	M	1	1	BALTIMORE CITY
INFLUENZA B VIRUS				
	F	16	1	MONTGOMERY
PARAINFLUENZA VIRUS 2				
	M	0	1	BALTIMORE CITY
TOTAL			**5**	

VIRAL POLYMERASE CHAIN REACTION (PCR)

ISOLATE SEX	AGE	#	JURISDICTION
HERPES SIMPLEX VIRUS TYPE 1			
F	18	1	ALLEGANY
F	47	1	BALTIMORE
U	19	1	BALTIMORE CITY
F	18	1	BALTIMORE CITY
F	21	1	BALTIMORE CITY
F	25	1	BALTIMORE CITY
F	29	1	BALTIMORE CITY
M	20	1	BALTIMORE CITY
F	19	1	CARROLL
F	32	1	CHARLES
F	21	1	FREDERICK
M	23	1	HARFORD
F	24	1	MONTGOMERY
M	25	1	MONTGOMERY
F	14	1	PRINCE GEORGE'S
F	18	1	PRINCE GEORGE'S
F	19	1	PRINCE GEORGE'S
F	21	2	PRINCE GEORGE'S
F	25	1	PRINCE GEORGE'S
M	21	1	QUEEN ANNE'S
F	16	1	SOMERSET
F	18	1	SOMERSET
U	20	1	WICOMICO
HERPES SIMPLEX VIRUS TYPE 2			
F	18	1	ALLEGANY
F	19	1	ANNE ARUNDEL
F	29	1	ANNE ARUNDEL
F	21	1	BALTIMORE
F	30	1	BALTIMORE
F	0	1	BALTIMORE CITY
F	23	1	BALTIMORE CITY
F	24	1	BALTIMORE CITY
F	26	1	BALTIMORE CITY
F	33	1	BALTIMORE CITY
F	38	1	BALTIMORE CITY
F	39	1	BALTIMORE CITY
M	0	1	BALTIMORE CITY
M	18	1	BALTIMORE CITY
M	20	1	BALTIMORE CITY
M	21	1	BALTIMORE CITY
M	22	1	BALTIMORE CITY
M	25	1	BALTIMORE CITY
M	29	2	BALTIMORE CITY
U	23	1	BALTIMORE CITY
F	26	1	CHARLES
F	28	1	CHARLES
F	31	1	CHARLES
F	25	1	FREDERICK
F	33	1	FREDERICK
F	28	1	HARFORD
M	31	1	HOWARD
F	30	1	MONTGOMERY
F	33	1	MONTGOMERY
M	23	2	MONTGOMERY
F	21	2	PRINCE GEORGE'S
F	22	1	PRINCE GEORGE'S
F	23	1	PRINCE GEORGE'S
F	32	1	PRINCE GEORGE'S
F	43	1	PRINCE GEORGE'S
M	26	1	PRINCE GEORGE'S
F	15	1	SAINT MARY'S
F	27	1	WICOMICO
INFLUENZA A(H3)			
M	1	1	BALTIMORE CITY
TOTAL		**67**	

VIRAL HEPATITIS

ORGANISM	# SPECIMENS	# POSITIVES	JURISDICTION
HEPATITIS A			
	1	0	BALTIMORE
	1	0	MONTGOMERY
	1	0	PRINCE GEORGE'S
SUBTOTAL	**3**	**0**	
HEPATITIS B			
	48	1	ALLEGANY
	171	3	ANNE ARUNDEL
	48	1	BALTIMORE
	349	4	BALTIMORE CITY
	1	0	CALVERT
	10	0	CARROLL
	114	0	CECIL
	4	0	CHARLES
	36	0	FREDERICK
	8	0	GARRETT
	23	0	HARFORD
	25	0	HOWARD
	1	0	KENT
	380	6	MONTGOMERY
	368	5	PRINCE GEORGE'S
	1	0	QUEEN ANNE'S
	1	0	SOMERSET
	15	0	TALBOT
	36	0	WASHINGTON
	55	2	WICOMICO
SUBTOTAL	**1,694**	**22**	
HEPATITIS C			
	40	7	ALLEGANY
	178	27	ANNE ARUNDEL
	53	6	BALTIMORE
	181	30	BALTIMORE CITY
	1	0	CAROLINE
	14	1	CARROLL
	89	14	CECIL
	8	0	CHARLES
	37	2	FREDERICK
	12	2	GARRETT
	50	1	HARFORD
	10	0	HOWARD
	1	0	KENT
	94	1	MONTGOMERY
	247	9	PRINCE GEORGE'S
	1	0	QUEEN ANNE'S
	15	0	TALBOT
	13	0	WASHINGTON
	10	0	WICOMICO
SUBTOTAL	**1,054**	**100**	
TOTALS	**2,751**	**122**	

RABIES

SOURCE	#	JURISDICTION
BAT	1	BALTIMORE
	3	BALTIMORE CITY
	1	FREDERICK
	1	QUEEN ANNE'S
	1	WICOMICO
CAT	1	CARROLL
	2	FREDERICK
FOX	1	ANNE ARUNDEL
	1	BALTIMORE CITY
	1	CALVERT
	1	CHARLES
	1	FREDERICK
	1	WORCESTER
RACCOON	2	ALLEGANY
	3	ANNE ARUNDEL
	1	BALTIMORE
	2	BALTIMORE CITY
	1	CAROLINE
	3	CARROLL
	2	DORCHESTER
	2	FREDERICK
	2	HARFORD
	1	HOWARD
	1	MONTGOMERY
	1	PRINCE GEORGE'S
	2	QUEEN ANNE'S
	1	TALBOT
	2	WASHINGTON
	1	WICOMICO
	1	WORCESTER
SKUNK	1	GARRETT
	1	WICOMICO
TOTAL POSITIVES	**46**	
TOTAL SPECIMENS	**351**	

CHLAMYDIOPHILIA PSITTACI
(CHLAMYDIA)

REPORTED QUARTERLY
NO REPORT THIS MONTH

VIRAL DISEASE ASSESSMENT - HIV

LYMPHOCYTE PHENOTYPING
(METHOD - FLOW CYTOMETRY)

DATES Quarterly comparison 2009-2010	% CD4 LYMPHOCYTES <14%	14%-28%	≥29%	TOTAL
7/01/10 - 9/30/10	140	418	294	**852**
7/01/09 - 9/30/09	130	411	299	**840**

NEWBORN & CHILDHOOD SCREENING

PRESUMPTIVE POSITIVES

DISORDERS	#
PHENYLKETONURIA (PKU)	1
MAPLE SYRUP URINE DISEASE (MSUD)	5
HOMOCYSTINURIA	14
TYROSINEMIA	7
ARGININEMIA	1
CITRULLINEMIA	0
GALACTOSEMIA	2
BIOTINIDASE DEFICIENCY	13
HYPOTHYROIDISM	81
HEMOGLOBIN -DISEASE	16
HEMOGLOBIN -BENIGN	574
CONGENITAL ADRENAL HYPERPLASIA (CAH)	8
CYSTIC FIBROSIS	2
FATTY ACID OXIDATIONS	5
ORGANIC ACIDEMIAS	7
ACYLCARNITINE - BORDERLINE	5
ACYLCARNITINE - OTHERS	0

MONTHLY TOTALS

# OF SPECIMENS SCREENED	12,960
NUMBER OF TESTS	767,737
% UNSATISFACTORY SPECIMENS	3.3

2010 YEAR-TO-DATE CONFIRMED CASES

CONDITIONS	# CONFIRMED
MEDIUM CHAIN ACYL-CoA DEHYDROGENASE DEFICIENCY (MCAD)	2
SHORT CHAIN ACYL-CoA DEHYDROGENASE DEFICIENCY (SCAD)	9
ELEVATED FORMIMINOGLUTAMIC ACID (FIGLU)	1
3-METHYLCROTONYL-COA CARBOXYLASE DEFICIENCY (3-MCC)	3
METHYLMALONIC ACIDEMIA (MMA)	1
GLUTARIC ACIDURIA TYPE 1 (GA-1)	1
BRANCHED CHAIN KETOACIDOSIS (BCK/MSUD)	1
GALACTOSE EPIMERASE DEFICIENCY	2
GALACTOSEMIA - VARIANT -DG	4
GALACTOSEMIA - UNKNOWN VARIANT	1
PARTIAL BIOTINIDASE DEFICIENCY	2
PROBABLE BIOTINIDASE CARRIER	3
PROBABLE GN	2
CONGENITAL ADRENAL HYPERPLASIA-SALT WASTING	2
CONGENITAL ADRENAL HYPERPLASIA-UNCLASSIFIED	1
HYPOTHYROIDISM - PRIMARY	16
OTHER HYPOTHYROIDISM	10
TBG DEFICIENCY	9
SICKLE CELL DISEASE -SS	37
SICKLE CELL DISEASE -SC	25
SICKLE CELL DISEASE -S BETA THALASSEMIA	6
SICKLE CELL DISEASE- BETA 0 THALASSEMIA	1
SICKLE CELL DISEASE-SV	1
SICKLE CELL TRAIT	1
HEMOGLOBIN VARIANT	1
CYSTIC FIBROSIS	5
CFTR-RELATED METABOLIC SYNDROME (CRMS)	1
TRANSIENT TYROSINEMIA	5

ENVIRONMENTAL CHEMISTRY

SAMPLE TYPES	# NON-COMPLIANT	# TESTED
ASBESTOS		
AIR	0	0
BULK	6	6
AIR QUALITY		
$PM_{2.5}$	0	321
RADIATION		
AIR/CHARCOAL FILTERS	0	64
MILK	0	0
WIPES	0	70
RAW WATER	0	8
VEGETATION		
OTHER	0	1
DRINKING WATER		
METALS		
COMMUNITY	4	11
NON-COMMUNITY	2	25
PRIVATE WELLS	25	95
PESTICIDES & PCBs		
COMMUNITY	0	77
NON-COMMUNITY	0	18
PRIVATE WELLS	0	40
VOLATILE ORGANIC COMPOUNDS		
COMMUNITY	1	106
NON-COMMUNITY	0	52
PRIVATE WELLS	0	16
RADIATION		
COMMUNITY	2	17
NON-COMMUNITY	0	6
PRIVATE WELLS	0	9
INORGANICS		
COMMUNITY	0	34
NON-COMMUNITY	4	27
PRIVATE WELLS	2	126
FOOD CHEMISTRY		
SUSPECTED TAMPERING	0	0
MICROSCOPIC FILTH	0	0
LABELING	0	0
SURVEILLANCE	0	8
CHEMICAL CONTAMINATION	0	0
TOTAL	**46**	**1,137**

VIRAL LOAD SPECIMENS

HIV-1 RNA COPIES/ML	$<10^3$	10^3—10^4	10^4—10^5	$>10^5$	TOTALS
ALLEGANY	9	0	1	0	**10**
CARROLL	1	0	0	0	**1**
FREDERICK	2	1	0	0	**3**
MONTGOMERY	68	4	8	1	**81**
PRINCE GEORGE'S	92	13	4	4	**113**
WASHINGTON	9	1	0	0	**10**
WICOMICO	1	0	0	0	**1**
SUBTOTALS	**182**	**19**	**13**	**5**	**219**
DEPT. OF CORRECTIONS	15	1	3	0	**19**
TOTALS	**197**	**20**	**16**	**5**	**238**

HIV ANTIBODY SCREENING

SUBMITTER	TOTAL SPECI-MENS	# EIA POSITIVE	% EIA POSITIVE	# WB POSITIVE	% WB POSITIVE
CORRECTION FACILITY JUVENILE	72	0	0.00%	0	0.00%
CORRECTIONAL INSTITUTIONS	185	4	2.16%	3	75.00%
FAMILY PLANNING (NON-GOVT)	120	1	0.83%	0	0.00%
HEALTH CENTERS (NON-GOVT)	416	31	7.45%	30	96.77%
HLTH DEPT, NON-STD, FAM PLAN	383	1	0.26%	0	0.00%
HLTH DEPT, NON-STD, OB/GYN	73	0	0.00%	0	0.00%
HLTH DEPT, NON-STD, OTHER	598	63	10.54%	59	93.65%
HLTH DEPT, STD CLINICS	1,077	15	1.39%	12	80.00%
HOSPITAL, OTHER	106	9	8.49%	6	66.67%
HOSPITAL, PUBLIC	34	0	0.00%	0	0.00%
LABORATORIES (NON-HOSPITAL)	377	16	4.24%	8	50.00%
PEDIATRIC - CHILD HEALTH	5	0	0.00%	0	0.00%
PRIVATE PHYSICIANS	2	0	0.00%	0	0.00%
PRIVATE STUDENT HEALTH CTRS	36	0	0.00%	0	0.00%
PUBLIC STUDENT HEALTH CTRS	270	0	0.00%	0	0.00%
UNKNOWN, NOT SPECIFIED	2	0	0.00%	0	0.00%
TOTALS	**3,756**	**140**	**3.73%**	**118**	**84.29%**

MAILING LABEL

Critical Link
c/o Georgia Corso, Room L-15
J. Mehsen Joseph Public Health Laboratory
Department of Health & Mental Hygiene
201 West Preston Street
Baltimore, Maryland 21201