

# CRITICAL LINK



A Publication of the  
Maryland Department of  
Health and Mental Hygiene

The Laboratories Administration—Maryland's State Public Health Laboratory

## Bovine Growth Hormone

### Public concerns and scientific findings

As the nation is being pushed by the media and physicians to become more aware of potential health concerns and hazards, many people are scrutinizing ingredients in the food and beverage products they are consuming. Parents are concerned their children are coming in contact with too many chemicals that may have unknown future effects on their small bodies. One chemical of concern to the public is bovine growth hormone (bGH).<sup>1</sup>

Bovine growth hormone, also known as bovine somatotropin or bST, is produced naturally by the cow in her pituitary gland. It is responsible and necessary for normal animal growth and milk production. The pharmaceutical development of bGH, referred to as recombinant bovine growth hormone, or rbGH, is a pure form of this hormone. When administered to dairy cows, it

generally increases milk production and therefore milk revenue.<sup>2</sup>

Over the last two centuries, milk production has undergone much advancement in technology, but also many tribulations for the milk



producer. Small herds and hand milking gave way to larger herds and automated milking machines. Disease-causing milk led to the development of pasteurization. Pasteurization, quality requirements, automation, road improvements, and

automobiles all contributed to safer and cheaper milk products. As the demand for wholesome milk and dairy products increased, farmers established milk producer cooperatives to sell their products and increase profits.<sup>3,1</sup>

In 1937, during the evolution of the milk industry, researchers discovered that crude extracts of bGH increased milk production in lactating cows. This compound prevented mammary cell death in the cow's udder and therefore, prevented a decrease in milk production by the cow.<sup>4</sup> In the 1970's, recombinant DNA technology was developed and the production of the scientifically engineered recombinant bovine growth hormone (rbGH) ensued.

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## TECHNICAL QUESTIONS

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

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Cornell University and private sector companies investigated the effects of rbGH in milk and meat products. In 1993, Monsanto was given U.S. Food and Drug Administration approval to market their rbGH, Posilac™, to dairy farmers in the United States for use in their herds.<sup>5</sup>

To better understand how rbGH is used by the farmer and its effects on the dairy cow, one needs to understand the natural lactating cycle of the dairy cow.

A dairy cow begins the lactation cycle and produces milk at a moderate amount upon the delivery of a calf. Milk production increases until approximately 70 days into the lactation cycle. Then the cow's milk supply gradually decreases until the cow is "dry" or ceases to produce milk.<sup>6</sup> The increase and decrease in milk production by a cow is directly related to the amount of milk producing cells in the udder. The number of cells will increase up to the 70th day and then begin to decrease. Once these cells die, they are not replaced until the next lactation cycle.<sup>7</sup>

Just before the end of the lactation cycle, and milk production begins to decline, the cow rbGH is then re-injected every 14 days to help maintain milk production. If rbGH is administered at any other time in her cycle, it is virtually ineffective. The amount of rbGH needed to stimulate increased milk production is small, and the administration of supplements of rbGH does not affect the quantity of bGH found in the milk supply or that cow. The hormone also increases a cow's intake of water and food, which supports the increase in her milk

production. Generally, this hormone will increase milk production by 10-15 percent per cow. It should also be noted that the use of rbGH is based on the individual cow's cycle and is not administered to the whole herd.<sup>4,7</sup>

Use of the genetically engineered hormone also has had its repercussions. There was much argument and controversy over the decision made by the FDA to approve Posilac™. The extensive studies for product safety and efficiency had to satisfy and meet FDA's three criteria for approval of new veterinary drugs. These are: the drug is safe to humans, animals, and the environment; it is effective; and it is made with a consistent quality. However, many studies completed before and after the FDA's approval raised several serious animal and human health concerns.<sup>8</sup>

The approval of Posilac™ has been so controversial that Monsanto has sued milk producers who sold product labeled as "hormone free," arguing false advertisement, since all milk has naturally occurring hormones in it, including bGH. Product labeling should allow consumers to make better informed decisions and allow producers and cooperatives to distinguish and differentiate their products from competing products. Milk labeled "hormone free" supported the perception that conventionally produced milk was less healthy and less safe for consumers.<sup>9,10</sup> At one time around 22 percent of dairies in the United States used Posilac™. However, consumers have made it clear they do not want milk from cows treated with artificial hormones. In 2007, the United States Department of Agriculture found that only 17 percent of dairy

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Photo source: DHMH, Office of Food Protection and Consumer Health Services, Division of Milk Control.

There are also claims of health concerns from consumers of milk products from cows treated with rbGH. Insulin-like growth factor-1 (IGF-1) is a hormone found in the milk of cows and humans. IGF-1 affects how quickly calves and babies grow. This hormone is very much like insulin, both structurally and in its inability to be effective if taken orally. Naturally produced, this hormone is a protein and is harmless. Milk from rbGH-treated cows contains up to twice as high levels of IGF-1. Some sources argue that rbGH-treated cows also produce IGF-1 and it is a suspected carcinogen, thought to be associated with breast, prostate, and

colon cancers.<sup>13</sup> IGF-1 is not denatured or destroyed during pasteurization and milk processing. However, heat treatment used in processing baby formula, as well as cooking the milk, does destroy this hormone.<sup>14, 13</sup> Bauman's research group at Cornell University has concluded that normal human digestion also renders IGF-1 inactive so that it is not a health concern. The low-pH environment and the digestive enzymes<sup>4</sup> break IGF-1 down to single amino acids and peptides in the digestive track.

Today, many people remain concerned about the amounts of bGH in their milk, making milk testing important for dairy production and sales. The Maryland Department of

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farmers were still using the pharmaceutical derivation of the hormone.<sup>9</sup>

Dairy management is crucial to dairy cow productivity and farm profit, as well as essential to the effectiveness of Posilac™ use. The benefits from the use of Posilac™ include increased profitability of a herd as its lactation cycle progresses, an increase of 5 – 15 pounds of milk per day per cow, the extension of the lactation cycle, and lower farm fixed costs over units of milk produced. Posilac™ can also be used to allow decreased herd size while still yielding the same amount of milk for sale.<sup>11</sup>

In contrast to the declared benefits of Posilac™ use, opponents have proclaimed it causes side effects. There have been claims that cows treated with Posilac™ have an increased propensity to develop mastitis, more difficulty with reproductive issues, and more problems with lameness. All of these situations and conditions cause the farmers to administer more antibiotics.<sup>7, 9, 12</sup> However, government organizations and scientists have investigated these claims and found no relationship linking rbGH with animal ill health, including claims of increased incidence of mastitis. Ironically, scientific evidence indicates cows supplemented with rbGH are able to recover more rapidly from mastitis.<sup>4</sup>

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Health and Mental Hygiene follows strict guidelines for monitoring milk, milk products, and the dairy industry in Maryland. Dairy herd health can be monitored by several existing tests: standard plate count, inhibitor (antibiotic) testing, and somatic (pus) cell counts. These tests are the “checks and balances” to monitor herd and animal infection as well as antibiotic treatment of the herds’ milk that reaches consumers.

All milk contains bGH and the synthetic form of bGH cannot be distinguished from the natural form. However, studies have shown that the artificial hormone does not pass into the milk supply.<sup>14, 10</sup> Cornell University has been very active studying rbGH and its affects on bovine and human subjects. However, at the present time, there are no field tests available for testing bGH, the presence of rbGH or the amounts of hormone present in milk. Currently, one must depend on the honesty of the farmer and/or processing plant’s rbST-free claims.<sup>15</sup>

In conclusion, pending further research and development of tests specific for bGH or rbGH, the consumer is left to individually research this topic. One should use discretion when exploring such a controversial topic since the internet offers both scientifically-based information and alternative opinion-based information. Based upon research for this paper, the Food and Drug Administration, the World Health Organization, American Medical Association, American Diabetes Association, and the National Institute of Health have each independently confirmed that

dairy products made from rbGH-treated cows are safe for human consumption.<sup>14</sup>

*This article written by Jo Ann Flinn, Chief, Western Maryland Regional Laboratory.*

## References

- <sup>1</sup> Milk Production Timeline. [www.google.com](http://www.google.com)
- <sup>2</sup> Juskevich, J. and Guyer, C. 1990 Bovine growth hormone: human food safety evaluation. *Science*. Volume 249, pp 975.
- <sup>3</sup> Historical Timeline: A brief history of cows milk, from the Ancient world to present. <http://milk.procon.org>
- <sup>4</sup> The Bauman Research Group, Cornell University. rbST General Information: Facts about rbST. [www.ansci.cornell.edu/bauman/envir\\_impact/rbst\\_booklet.html](http://www.ansci.cornell.edu/bauman/envir_impact/rbst_booklet.html)
- <sup>5</sup> bST Timeline: Chronology of Major bST studies and events. [www.elancodairy.com](http://www.elancodairy.com)
- <sup>6</sup> Eifert, M., Registered Maryland Milk Sanitarian, Maryland Department of Health and Mental Hygiene, Personal Interview, Milk Production of a Dairy Cow, 1500 EST December 2, 2005 at Western Maryland Regional Laboratory.
- <sup>7</sup> The facts about rbST. [www.rbstfacts.org](http://www.rbstfacts.org)
- <sup>8</sup> Biotechnology Education Program of Wisconsin, Extension and UW Biotechnology Center. Some Questions and Answers about BGH/BST? February 1994. [www.accessexcellence.org](http://www.accessexcellence.org)
- <sup>9</sup> Biello, D. Monsanto puts bovine growth hormone out to pasture. [www.scientificamerican.com](http://www.scientificamerican.com)
- <sup>10</sup> Kanter, C., Messer, K. and Kaiser, H. 2008 4th Quarter The Stigma Effect of rBST labeling on Milk. *NICPRE*.
- <sup>11</sup> Economics and Farm Benefits of Posilac™. [www.rbstfacts.org](http://www.rbstfacts.org)
- <sup>12</sup> The Humane Farming Association. Milk Machines – Dangers in the Dairy Industry. [www.hfa.org/campaigns/dairy.htm](http://www.hfa.org/campaigns/dairy.htm)
- <sup>13</sup> Ewall, M. Bovine Growth Hormone: Milk Does Nobody Good. [www.ejnet.org/bgh/nogood.com](http://www.ejnet.org/bgh/nogood.com)
- <sup>14</sup> Brennard, C. and Bagley, C. Food Safety Fact Sheet: Bovine Somatotropin in Milk. [http://extension.usu.edu/files/publications/factsheet/FN\\_250\\_6.pdf](http://extension.usu.edu/files/publications/factsheet/FN_250_6.pdf)
- <sup>15</sup> Brown, Ronald. Dairy Products Specialist 1, NYS Dept. of Agriculture & Markets, 24 Root St., New Hartford, NY. Interview via e-mail September 17, 2009.

## Keith Hutton joins the Laboratories Administration as Safety Officer

The Laboratories Administration is pleased to announce the appointment of Mr. Keith Hutton as the new Laboratory Safety Officer.

Keith has more than seven years experience as the Laboratory Manager and Safety Officer for the Henry M.

Jackson Foundation for the Advancement of Military Medicine. His scientific career began in 1983 when the cell biology pioneer, Dr. Robert Bassin, recruited him as a freshman in high school, to be his assistant under a mentoring program at the National Cancer Institute. Keith went on to earn a bachelor of science in microbiology and a bachelor of arts in management studies.



Keith has held positions in biotechnology, gene therapy, pharmacology, and has headed many different kinds of laboratories in both academic and industrial settings.

The Laboratory Safety Office is located in room L-43 of the Laboratories Tower. He can be reached by phone at (410) 767-4305 or by email at [HuttonK@dnhm.state.md.us](mailto:HuttonK@dnhm.state.md.us).

# Two Months of Laboratory Statistics in This Issue

## Critical Link shortens statistical gap

Each issue of the *Critical Link* provides statistical reports on microbial isolates, environmental findings, and newborn screening from the Laboratories Administration. The Administration's new laboratory information management system, STARLIMS, greatly improved its data management capabilities allowing us to shorten reporting times in the *Critical Link*.

A number of stand-alone databases have also been consolidated and incorporated into our STARLIMS. The first result from STARLIMS was released on October 12, 2006, and each laboratory has waited in turn for the Office of Information Management Services (OIMS) to switch its reporting over to this new comprehensive program.

In March 2008, the Laboratories Administration implemented new forms to be used for specimen and sample submission. These forms streamline the data entry process, and lessen the chance for error.

In 2009, OIMS implemented MyLims™, a web-based application

used by external customers to access the Laboratories Administration's STARLIMS database 24/7. The addition of a new storage area network (SAN) to the data center also ensured sufficient data storage capacity.

These advancements now allow the *Critical Link* to acquire and publish more current statistics each month. In this issue, then, the publication advances one month forward by including two months' statistics, August and September. Starting in December, the December and future issues will again come out with a single month of statistics but only five to seven weeks old. Our goal, ultimately, is to publish statistics that are only three to five weeks old.

*This article written by Georgia Corso.*

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.

# Laboratory Statistics

Reported from the Laboratories Administration during the months of August and September 2009

## ENTERIC BACTERIOLOGY AUGUST

GENUS SEROVAR  
SEX AGE # JURISDICTION

### CAMPYLOBACTER JEJUNI

F	0	1	ALLEGANY
M	64	1	ALLEGANY
F	42	1	ANNE ARUNDEL
M	85	1	ANNE ARUNDEL
M	45	1	ANNE ARUNDEL
M	12	1	ANNE ARUNDEL
U	105	1	BALTIMORE
U	63	1	BALTIMORE
F	57	1	BALTIMORE
F	54	1	BALTIMORE
F	2	1	BALTIMORE
M	77	1	BALTIMORE
M	57	1	BALTIMORE
M	28	1	BALTIMORE
M	23	1	BALTIMORE
M	0	1	BALTIMORE CITY
U	45	1	HARFORD
F	57	1	KENT
F	17	1	MONTGOMERY
M	77	1	MONTGOMERY
M	15	2	MONTGOMERY

### CAMPYLOBACTER UPSALIENSIS

M	44	1	BALTIMORE CITY
F	0	1	BALTIMORE CITY

### ESCHERICHIA COLI, SEROTYPE O157:H7

U	0	1	WASHINGTON
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### ESCHERICHIA COLI, SEROTYPE O26:H11

U	4	1	OUT OF STATE
F	3	1	OUT OF STATE
F	2	1	OUT OF STATE

### PARATYPHI B VAR L(+) TARTRATE +

M	14	1	BALTIMORE CITY
F	76	1	OUT OF STATE

### SALMONELLA

F	74	1	BALTIMORE CITY
F	6	1	BALTIMORE CITY
F	1	1	BALTIMORE CITY
F	40	1	MONTGOMERY
F	76	1	OUT OF STATE
M	2	1	TALBOT



SALMONELLA			
F	45	1	BALTIMORE
M	48	1	BALTIMORE
M	1	1	BALTIMORE
M	49	1	BALTIMORE CITY
M	7	1	BALTIMORE CITY
U	1	1	CARROLL
M	0	1	MONTGOMERY
M	36	1	OUT OF STATE
M	0	1	OUT OF STATE
M	0	1	TALBOT
F	65	1	WICOMICO
SALMONELLA 6,7:-:1,5			
M	35	1	BALTIMORE CITY
SALMONELLA ENTERITIDIS			
F	57	1	ALLEGANY
SALMONELLA MBANDAKA			
M	0	1	PRINCE GEORGE'S
SALMONELLA PANAMA			
M	16	1	FREDERICK
SALMONELLA SER 4,12:R:-			
M	6	3	BALTIMORE CITY
M	6	1	WICOMICO
SALMONELLA SER 4,5,12:D:-			
F	56	1	OUT OF STATE
F	5	1	OUT OF STATE
F	1	1	OUT OF STATE
SALMONELLA SER BRAENDERUP			
M	10	2	BALTIMORE CITY
M	38	1	OUT OF STATE
SALMONELLA SER DUBLIN			
M	13	1	ANNE ARUNDEL
SALMONELLA SER ENTERITIDIS			
F	67	1	ALLEGANY
M	3	1	BALTIMORE CITY
M	48	1	CARROLL
F	2	1	MONTGOMERY
SALMONELLA SER INFANTIS			
M	78	1	ALLEGANY
M	1	1	BALTIMORE CITY
SALMONELLA SER JAVIANA			
F	5	1	ANNE ARUNDEL
M	26	1	BALTIMORE
F	49	1	OUT OF STATE
M	3	1	OUT OF STATE
F	71	1	OUT OF STATE
SALMONELLA SER NEWPORT			
M	3	1	BALTIMORE
F	2	1	OUT OF STATE
M	0	1	OUT OF STATE
M	46	1	WICOMICO
SALMONELLA SER ORANIENBURG			
U	42	1	BALTIMORE CITY
U	42	1	BALTIMORE CITY
F	26	1	BALTIMORE CITY
F	23	1	BALTIMORE CITY
U	3	1	OUT OF STATE
F	24	6	OUT OF STATE
SALMONELLA SER TYPHI			
U	6	1	PRINCE GEORGE'S
SALMONELLA TYPHI			
F	31	1	HARFORD
F	74	1	PRINCE GEORGE'S
SHIGELLA FLEXNERI			
F	2	2	BALTIMORE CITY
SHIGELLA SONNEI			
F	6	1	BALTIMORE
F	20	1	CECIL
VIBRIO FLUVIALIS			
M	67	1	BALTIMORE CITY
VIBRIO PARAHAEMOLYTICUS			
M	27	1	CARROLL
<b>TOTAL</b>	<b>78</b>		

## ISOLATES - REFERENCE AUGUST

GENUS SPECIES			
SOURCE	#	JURISDICTION	
CAPNOCYTOPHAGA CANIMORSUS			
BLOOD	1	ANNE ARUNDEL	
ENTEROCOCCUS FAECIUM			
URINE	1	WICOMICO	
ESCHERICHIA COLI			
UNKNOWN	1	ALLEGANY	
UNKNOWN	1	BALTIMORE CITY	
KLEBSIELLA PNEUMONIAE			
UNKNOWN	1	BALTIMORE CITY	
SPUTUM	1	PRINCE GEORGE'S	
URINE	2	PRINCE GEORGE'S	
PROTEUS MIRABILIS			
URINE	1	CARROLL	
STAPHYLOCOCCUS AUREUS			
BLOOD	1	BALTIMORE CITY	
<b>TOTAL</b>	<b>10</b>		

## ISOLATES - REFERENCE SEPTEMBER

GENUS SPECIES			
SOURCE	#	JURISDICTION	
AEROMONAS VERONII SUBSP SOBRIA			
STOOL	1	WICOMICO	
ENTEROBACTER CLOACAE			
FOOT	1	CARROLL	
SPUTUM	1	CARROLL	
ERYSIPELOTHRIX RHUSIOPATHIAE			
BLOOD	1	ALLEGANY	
ESCHERICHIA COLI			
URINE	1	BALTIMORE CITY	
PSEUDOMONAS PUTREFACIENS			
WOUND	1	WORCESTER	
ROSEOMONAS SPECIES			
BLOOD	1	TALBOT	
STREPTOCOCCUS CONSTELLATUS			
UNKNOWN	1	BALTIMORE	
VIBRIO CHOLERAЕ			
STOOL	1	CALVERT	
<b>TOTAL</b>	<b>9</b>		

## ISOLATES - MISCELLANEOUS AUGUST

GENUS SPECIES			
SOURCE	#	JURISDICTION	
ENTEROBACTER CLOACAE			
FOOT	1	FREDERICK	
ENTEROCOCCUS FAECALIS			
FOOT	1	FREDERICK	
ESCHERICHIA COLI			
VAGINAL	1	MONTGOMERY	
KLEBSIELLA PNEUMONIAE			
WOUND	1	WASHINGTON	

PSEUDOMONAS AERUGINOSA			
SPUTUM	1	WASHINGTON	
PSEUDOMONAS PUTIDA			
WOUND	1	MONTGOMERY	
SPHINGOMONAS PAUCIMOBILIS			
FOOT	1	FREDERICK	
STAPHYLOCOCCUS AUREUS			
BLOOD	2	BALTIMORE CITY	
NASAL	1	CARROLL	
WOUND	2	CARROLL	
TOE	1	FREDERICK	
FOOT	1	FREDERICK	
TOE	1	FREDERICK	
WOUND	3	FREDERICK	
VAGINAL	1	MONTGOMERY	
WOUND	1	PRINCE GEORGE'S	
STAPHYLOCOCCUS, COAGULASE NEGATIVE			
WOUND	1	ALLEGANY	
BLOOD	2	BALTIMORE CITY	
CSF	1	BALTIMORE CITY	
SKIN	1	BALTIMORE CITY	
WOUND	1	CARROLL	
STREPTOCOCCUS, ALPHA-HEMOLYTIC			
BLOOD	1	BALTIMORE CITY	
STREPTOCOCCUS, BETA HEMOLYTIC NON-GROUP A			
THROAT	2	ALLEGANY	
STREPTOCOCCUS, BETA HEMOLYTIC GROUP B			
VAGINAL	3	ANNE ARUNDEL	
VAGINAL	2	ANNE ARUNDEL	
ENDOCERVIX	1	FREDERICK	
VAGINAL	1	HOWARD	
ENDOCERVIX	1	PRINCE GEORGE'S	
RECTAL	2	PRINCE GEORGE'S	
VAGINAL	3	PRINCE GEORGE'S	
VAGINAL	2	PRINCE GEORGE'S	
<b>TOTAL</b>	<b>42</b>		

## ISOLATES - MISCELLANEOUS SEPTEMBER

GENUS SPECIES			
SOURCE	#	JURISDICTION	
ACINETOBACTER CALCOACETICUS- ACINETOBACTER BAUMANNI COMPLEX			
TOE	1	FREDERICK	
ENTEROBACTER CLOACAE			
BLOOD	1	BALTIMORE CITY	
ENTEROCOCCUS AVIUM			
FOOT	1	FREDERICK	
ENTEROCOCCUS FAECALIS			
WOUND	1	PRINCE GEORGE'S	
ENTEROCOCCUS FECALIS			
VAGINAL	1	MONTGOMERY	
ESCHERICHIA COLI			
BLOOD	3	BALTIMORE CITY	
URINE	1	CARROLL	
RECTUM	1	PRINCE GEORGE'S	
SPUTUM	1	WICOMICO	
ESCHERICHIA VULNERIS			
WOUND	1	BALTIMORE	

GARDNERELLA VAGINALIS		
VAGINAL	2	SOMERSET
KLEBSIELLA PNEUMONIAE		
WOUND	1	MONTGOMERY
PSEUDOMONAS AERUGINOSA		
WOUND	1	BALTIMORE
EAR	1	MONTGOMERY
STAPHYLOCOCCUS AUREUS		
EYE	1	ALLEGANY
WOUND	1	BALTIMORE
BLOOD	1	BALTIMORE CITY
MRSA	1	BALTIMORE CITY
WOUND	5	BALTIMORE CITY
WOUND	2	CARROLL
FOOT	1	FREDERICK
WOUND	1	PRINCE GEORGE'S
WOUND	1	SOMERSET
STAPHYLOCOCCUS, COAGULASE NEGATIVE		
MRSA	1	BALTIMORE CITY
BLOOD	4	BALTIMORE CITY
BREAST	1	BALTIMORE CITY
CSF	2	BALTIMORE CITY
WOUND	1	FREDERICK
STREPTOCOCCUS, ALPHA-HEMOLYTIC		
TONGUE	1	WICOMICO
STREPTOCOCCUS, BETA HEMOLYTIC GROUP A		
THROAT	3	ALLEGANY
STREPTOCOCCUS, BETA HEMOLYTIC NON-GROUP A		
THROAT	14	ALLEGANY
STREPTOCOCCUS, BETA HEMOLYTIC GROUP B		
VAGINAL	1	ANNE ARUNDEL
VAGINAL	1	MONTGOMERY
ENDOCERVIX 2		PRINCE GEORGE'S
VAGINAL	3	PRINCE GEORGE'S
VAGINAL	8	PRINCE GEORGE'S
VAGINAL	4	SOMERSET

**TOTAL 77**

### SEXUALLY TRANSMITTED DISEASES - AUGUST

GENUS SPECIES		
SEX	#	JURISDICTION

SYPHILIS SEROLOGY		
F	2	ANNE ARUNDEL
M	7	ANNE ARUNDEL
F	1	BALTIMORE
M	4	BALTIMORE
U	1	BALTIMORE
F	8	BALTIMORE CITY
M	26	BALTIMORE CITY
M	1	CALVERT
F	1	DORCHESTER
M	3	FREDERICK
M	1	HARFORD
F	1	HOWARD
M	2	HOWARD
F	1	MONTGOMERY
M	5	MONTGOMERY
U	1	MONTGOMERY
F	6	PRINCE GEORGE'S

M	27	PRINCE GEORGE'S
M	1	SOMERSET
M	1	TALBOT
M	1	UNKNOWN
U	1	UNKNOWN
M	1	WASHINGTON
M	1	WICOMICO

**TOTAL 104**

### CHLAMYDIA TRACHOMATIS

F	15	ANNE ARUNDEL
M	23	ANNE ARUNDEL
F	21	BALTIMORE
M	25	BALTIMORE
F	8	BALTIMORE CITY
M	31	BALTIMORE CITY
U	2	BALTIMORE CITY
F	2	CALVERT
M	1	CALVERT
F	3	CAROLINE
M	2	CAROLINE
F	1	CARROLL
M	1	CARROLL
F	1	CECIL
F	21	CHARLES
M	4	CHARLES
F	1	DORCHESTER
F	2	FREDERICK
M	2	FREDERICK
U	2	FREDERICK
F	2	GARRETT
F	4	HARFORD
F	4	HOWARD
M	6	HOWARD
F	1	KENT
F	12	MONTGOMERY
M	5	MONTGOMERY
F	45	PRINCE GEORGE'S
M	46	PRINCE GEORGE'S
F	2	QUEEN ANNE'S
U	1	QUEEN ANNE'S
F	8	SAINT MARY'S
F	1	SOMERSET
M	6	SOMERSET
F	2	TALBOT
M	2	TALBOT
F	6	WASHINGTON
M	4	WASHINGTON
F	19	WICOMICO
M	13	WICOMICO
F	3	WORCESTER
M	4	WORCESTER

**TOTAL 364**

### NEISSERIA GONORRHOEAE

F	1	ALLEGANY
F	1	ANNE ARUNDEL
M	1	ANNE ARUNDEL
F	3	BALTIMORE
M	5	BALTIMORE
M	1	BALTIMORE CITY
M	3	CAROLINE
F	2	CHARLES
M	6	CHARLES
F	1	DORCHESTER
M	1	DORCHESTER
M	1	FREDERICK
M	1	HOWARD
M	1	KENT
M	3	MONTGOMERY

F	3	PRINCE GEORGE'S
M	18	PRINCE GEORGE'S
M	1	SAINT MARY'S
M	1	WASHINGTON
F	8	WICOMICO
M	10	WICOMICO
F	2	WORCESTER
M	1	WORCESTER

**TOTAL 74**

### SEXUALLY TRANSMITTED DISEASES - SEPTEMBER

GENUS SPECIES		
SEX	#	JURISDICTION

SYPHILIS SEROLOGY		
F	2	ANNE ARUNDEL
M	3	ANNE ARUNDEL
F	2	BALTIMORE
M	5	BALTIMORE
F	12	BALTIMORE CITY
M	22	BALTIMORE CITY
U	1	BALTIMORE CITY
F	1	CALVERT
F	1	DORCHESTER
F	4	MONTGOMERY
M	4	MONTGOMERY
F	9	PRINCE GEORGE'S
M	18	PRINCE GEORGE'S
U	2	PRINCE GEORGE'S
F	1	TALBOT
M	1	WASHINGTON
F	3	WICOMICO
U	1	WICOMICO

**TOTAL 92**

### CHLAMYDIA TRACHOMATIS

F	4	ALLEGANY
M	7	ALLEGANY
F	23	ANNE ARUNDEL
M	16	ANNE ARUNDEL
U	1	ANNE ARUNDEL
F	27	BALTIMORE
M	25	BALTIMORE
U	1	BALTIMORE
F	9	BALTIMORE CITY
M	44	BALTIMORE CITY
U	5	BALTIMORE CITY
F	4	CALVERT
M	1	CALVERT
F	2	CAROLINE
F	2	CARROLL
M	1	CARROLL
F	8	CHARLES
M	1	CHARLES
F	2	DORCHESTER
M	1	DORCHESTER
F	8	FREDERICK
M	1	FREDERICK
F	9	HARFORD
M	3	HOWARD
M	1	KENT
F	16	MONTGOMERY
M	3	MONTGOMERY
F	68	PRINCE GEORGE'S
M	44	PRINCE GEORGE'S
U	1	PRINCE GEORGE'S
F	1	QUEEN ANNE'S

F	2	SAINTE MARY'S
F	3	SOMERSET
M	12	SOMERSET
F	4	TALBOT
F	2	WASHINGTON
F	24	WICOMICO
M	7	WICOMICO
F	5	WORCESTER
M	3	WORCESTER

**TOTAL 401**

**NEISSERIA GONORRHOEAE**

F	1	ANNE ARUNDEL
F	2	BALTIMORE
M	5	BALTIMORE
M	1	BALTIMORE CITY
F	1	CALVERT
M	2	CALVERT
F	1	CAROLINE
M	1	CECIL
F	1	CHARLES
M	3	CHARLES
F	1	DORCHESTER
F	1	HOWARD
M	1	MONTGOMERY
F	9	PRINCE GEORGE'S
M	28	PRINCE GEORGE'S
F	1	QUEEN ANNE'S
M	1	SAINTE MARY'S
F	1	SOMERSET
M	4	WICOMICO
M	1	WORCESTER

**TOTAL 66**

**PENICILLIN RESISTANT GONORRHEA**

REPORTED QUARTERLY 7-01-09 TO 9-30-09

SEX	AGE #	JURISDICTION
M	19 1	PRINCE GEORGE'S

**TOTAL 1**

**MYCOBACTERIOLOGY - AUGUST**

ISOLATE	SEX	AGE #	JURISDICTION
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AEROBIC ACTINOMYCETE			
F	72	1	FREDERICK
MYCOBACTERIUM ABSCESSUS			
F	49	1	BALTIMORE
F	60	1	PRINCE GEORGE'S
MYCOBACTERIUM AVIUM COMPLEX			
F	69	1	ANNE ARUNDEL
F	56	2	BALTIMORE
F	66	1	BALTIMORE
F	68	1	BALTIMORE
F	71	6	BALTIMORE
M	45	1	BALTIMORE
M	61	1	BALTIMORE
M	62	4	BALTIMORE
M	67	1	BALTIMORE
F	49	1	BALTIMORE CITY
F	60	1	BALTIMORE CITY
M	44	1	BALTIMORE CITY

M	49	1	BALTIMORE CITY
M	51	1	BALTIMORE CITY
F	90	2	CALVERT
F	72	2	CARROLL
M	48	1	FREDERICK
F	35	1	HARFORD
F	40	1	HOWARD
F	60	1	MONTGOMERY
M	44	1	OUT OF STATE
M	46	1	OUT OF STATE
F	40	1	PRINCE GEORGE'S
M	57	1	PRINCE GEORGE'S
F	79	1	WASHINGTON
M	53	1	WASHINGTON
F	58	1	WICOMICO
F	63	1	WICOMICO
F	67	1	WICOMICO
M	82	1	WICOMICO

**MYCOBACTERIUM BOVIS**

M	73	1	ANNE ARUNDEL
M	81	1	BALTIMORE

**MYCOBACTERIUM CHELONAE**

M	86	1	ANNE ARUNDEL
M	89	1	FREDERICK

**MYCOBACTERIUM FORTUITUM COMPLEX**

M	56	1	MONTGOMERY
M	62	1	MONTGOMERY
M	80	1	MONTGOMERY
M	61	1	OUT OF STATE
F	71	1	PRINCE GEORGE'S
M	42	1	PRINCE GEORGE'S

**MYCOBACTERIUM GORDONAE**

F	60	1	ANNE ARUNDEL
M	62	1	ANNE ARUNDEL
M	66	1	BALTIMORE
F	64	1	BALTIMORE CITY
F	0	1	CARROLL
F	82	2	CARROLL
F	33	1	PRINCE GEORGE'S
F	61	1	PRINCE GEORGE'S
F	24	1	WICOMICO
M	69	1	WICOMICO

**MYCOBACTERIUM KANSASII**

F	57	1	BALTIMORE CITY
M	49	3	OUT OF STATE

**MYCOBACTERIUM SCROFULACEUM**

F	82	1	BALTIMORE
M	72	1	PRINCE GEORGE'S

**MYCOBACTERIUM TUBERCULOSIS**

M	31	1	ANNE ARUNDEL
F	56	1	BALTIMORE
M	37	1	MONTGOMERY
M	23	1	PRINCE GEORGE'S
F	15	1	WICOMICO
F	24	1	WICOMICO

**MYCOBACTERIUM TUBERCULOSIS COMPLEX**

M	31	2	ANNE ARUNDEL
M	31	2	BALTIMORE
F	53	3	BALTIMORE CITY
F	65	1	FREDERICK
F	34	7	HOWARD
M	73	5	HOWARD
F	88	2	MONTGOMERY
M	25	1	MONTGOMERY
M	37	2	MONTGOMERY
M	65	3	MONTGOMERY
M	90	2	MONTGOMERY
M	65	1	OUT OF STATE
F	17	1	PRINCE GEORGE'S
F	30	7	PRINCE GEORGE'S
F	35	3	PRINCE GEORGE'S

F	60	5	PRINCE GEORGE'S
M	22	1	PRINCE GEORGE'S
M	72	4	PRINCE GEORGE'S
MYCOBACTERIUM XENOPI			
F	34	1	ANNE ARUNDEL
NON-PHOTOCHROMOGENIC MYCOBACTERIA			
F	69	1	BALTIMORE
SCOTOCHROMOGENIC MYCOBACTERIA			
F	88	1	MONTGOMERY
F	82	1	WICOMICO

**TOTAL 133**

**MYCOBACTERIOLOGY - SEPTEMBER**

ISOLATE	SEX	AGE #	JURISDICTION
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**AEROBIC ACTINOMYCETE**

F	91	1	ANNE ARUNDEL
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**MYCOBACTERIUM ABSCESSUS**

F	79	1	CALVERT
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**MYCOBACTERIUM AVIUM COMPLEX**

F	80	1	ALLEGANY
U	41	1	ANNE ARUNDEL
F	91	1	ANNE ARUNDEL
M	62	1	ANNE ARUNDEL
M	67	1	ANNE ARUNDEL
F	83	1	BALTIMORE
M	61	3	BALTIMORE
M	70	1	BALTIMORE
F	26	1	BALTIMORE CITY
F	76	1	BALTIMORE CITY
M	22	1	BALTIMORE CITY
M	26	1	BALTIMORE CITY
M	40	3	BALTIMORE CITY
M	46	1	BALTIMORE CITY
M	49	1	BALTIMORE CITY
M	77	1	BALTIMORE CITY
F	90	1	CALVERT
F	80	1	CARROLL
F	84	1	FREDERICK
M	35	1	MONTGOMERY
M	45	1	MONTGOMERY
F	44	1	PRINCE GEORGE'S
F	79	1	WASHINGTON
F	32	1	WICOMICO
F	63	2	WICOMICO

**MYCOBACTERIUM FORTUITUM**

F	76	1	ALLEGANY
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**MYCOBACTERIUM FORTUITUM COMPLEX**

M	74	1	BALTIMORE CITY
F	62	1	CARROLL
M	73	1	HOWARD
F	53	1	MONTGOMERY
M	68	1	MONTGOMERY
F	80	1	OUT OF STATE
F	44	1	PRINCE GEORGE'S
F	63	1	PRINCE GEORGE'S
F	35	1	TALBOT
F	73	2	WASHINGTON
F	76	1	WASHINGTON
M	62	1	WICOMICO

**MYCOBACTERIUM GORDONAE**

F	82	1	CARROLL
M	73	1	HOWARD
M	52	1	OUT OF STATE
M	23	1	PRINCE GEORGE'S
F	75	1	TALBOT
M	87	1	WASHINGTON

<b>MYCOBACTERIUM KANSASII</b>			
M	63	1	BALTIMORE CITY
F	58	3	OUT OF STATE
<b>MYCOBACTERIUM MARINUM</b>			
M	50	2	BALTIMORE CITY
<b>MYCOBACTERIUM SCROFULACEUM</b>			
F	82	1	BALTIMORE
<b>MYCOBACTERIUM TUBERCULOSIS COMPLEX</b>			
M	31	1	ANNE ARUNDEL
M	31	3	BALTIMORE
F	53	3	BALTIMORE CITY
F	34	3	HOWARD
M	73	3	HOWARD
F	65	3	MONTGOMERY
F	75	1	MONTGOMERY
F	84	1	MONTGOMERY
M	25	6	MONTGOMERY
M	90	2	MONTGOMERY
F	30	3	PRINCE GEORGE'S
F	35	1	PRINCE GEORGE'S
F	60	2	PRINCE GEORGE'S
M	45	1	PRINCE GEORGE'S
<b>RAPIDLY GROWING MYCOBACTERIA</b>			
F	65	1	MONTGOMERY
F	41	1	OUT OF STATE
<b>SCOTOCHROMOGENIC MYCOBACTERIA</b>			
M	44	1	OUT OF STATE
F	76	1	WICOMICO
<b>TOTAL</b>	<b>107</b>		

## MYCOBACTERIUM SUSCEPTIBILITY RESULTS AUGUST

18 ISOLATES IDENTIFIED  
8 DRUG RESISTANT STRAINS FOUND

#	JURISDICTION	DRUG(S)
2 <sup>A</sup>	MONTGOMERY	STREPTOMYCIN
1 <sup>C</sup>	MONTGOMERY	ISONIAZID, PYRAZINAMIDE, STREPTOMYCIN, RIFAMPIN, RIFABUTIN

<sup>A</sup> TWO ISOLATES FROM THE SAME PATIENT  
<sup>B</sup> PROBABLE FOR *M. BOVIS*  
<sup>C</sup> MEETS CASE DEFINITION OF  
MULTI-DRUG TUBERCULOSIS (MDRTB)

*Mycobacterium tuberculosis* complex consists of:  
*M. tuberculosis*  
*M. bovis*  
*M. bovis*, BCG  
*M. africanum*  
*M. microti*  
*M. canettii*

## MYCOBACTERIUM SUSCEPTIBILITY RESULTS SEPTEMBER

32 ISOLATES IDENTIFIED  
6 DRUG RESISTANT STRAINS FOUND

#	JURISDICTION	DRUG(S)
1	MONTGOMERY	STREPTOMYCIN
1	MONTGOMERY	STREPTOMYCIN
2 <sup>A</sup>	MONTGOMERY	ISONIAZID
1	FREDERICK	STREPTOMYCIN
1 <sup>B</sup>	BALTIMORE	PYRAZINAMIDE

<sup>A</sup> TWO ISOLATES FROM THE SAME PATIENT  
<sup>B</sup> PROBABLE FOR *M. BOVIS*  
<sup>C</sup> MEETS CASE DEFINITION OF  
MULTI-DRUG TUBERCULOSIS (MDRTB)

*Mycobacterium tuberculosis* complex consists of:  
*M. tuberculosis*  
*M. bovis*  
*M. bovis*, BCG  
*M. africanum*  
*M. microti*  
*M. canettii*

## MYCOLOGY - AUGUST

ISOLATE	SEX	AGE	#	JURISDICTION
<b>ABSIDIA SPECIES</b>				
F		91	1	BALTIMORE CITY
M		2	2	BALTIMORE CITY
<b>ASPERGILLUS FLAVUS</b>				
M		69	1	PRINCE GEORGE'S
<b>ASPERGILLUS FUMIGATUS</b>				
M		70	1	MONTGOMERY
M		76	1	MONTGOMERY
M		74	1	TALBOT
<b>ASPERGILLUS NIGER</b>				
F		77	2	ANNE ARUNDEL
M		70	2	MONTGOMERY
M		0	1	PRINCE GEORGE'S
M		58	1	PRINCE GEORGE'S
F		46	1	TALBOT
<b>CANDIDA ALBICANS</b>				
M		39	1	BALTIMORE
M		61	2	BALTIMORE
F		49	1	BALTIMORE CITY
F		62	1	BALTIMORE CITY
M		46	1	BALTIMORE CITY
M		49	1	BALTIMORE CITY
M		51	1	BALTIMORE CITY
M		61	1	BALTIMORE CITY
M		65	1	BALTIMORE CITY
M		75	1	BALTIMORE CITY
M		77	1	BALTIMORE CITY
M		80	1	BALTIMORE CITY
U		43	1	BALTIMORE CITY
F		54	1	CALVERT
M		81	3	CALVERT
F		42	1	MONTGOMERY
F		75	2	MONTGOMERY
M		22	1	MONTGOMERY
M		49	1	MONTGOMERY
M		67	1	MONTGOMERY
M		70	1	MONTGOMERY
M		82	1	MONTGOMERY
M		83	1	MONTGOMERY
U		0	2	PRINCE GEORGE'S
U		47	1	PRINCE GEORGE'S
F		0	2	PRINCE GEORGE'S
F		17	1	PRINCE GEORGE'S
F		21	1	PRINCE GEORGE'S
F		29	1	PRINCE GEORGE'S
F		44	1	PRINCE GEORGE'S
F		47	1	PRINCE GEORGE'S
F		60	2	PRINCE GEORGE'S
F		61	1	PRINCE GEORGE'S
F		69	1	PRINCE GEORGE'S
F		72	1	PRINCE GEORGE'S
F		87	1	PRINCE GEORGE'S
M		26	1	PRINCE GEORGE'S
M		57	1	PRINCE GEORGE'S
M		62	1	PRINCE GEORGE'S
M		72	1	PRINCE GEORGE'S
M		74	1	PRINCE GEORGE'S
M		75	1	PRINCE GEORGE'S
M		79	1	PRINCE GEORGE'S
M		88	1	PRINCE GEORGE'S
<b>CANDIDA GLABRATA</b>				
M		81	3	CALVERT
F		0	1	PRINCE GEORGE'S
M		62	1	PRINCE GEORGE'S
M		86	1	WASHINGTON
<b>CANDIDA GUILLIERMONDII</b>				
F		85	1	MONTGOMERY
<b>CANDIDA KRUSEI</b>				
M		73	1	MONTGOMERY
<b>CANDIDA PARAPSILOSIS</b>				
F		28	1	PRINCE GEORGE'S
F		42	1	PRINCE GEORGE'S
F		45	2	PRINCE GEORGE'S
F		51	1	PRINCE GEORGE'S
F		60	1	PRINCE GEORGE'S
F		62	1	PRINCE GEORGE'S
F		72	1	PRINCE GEORGE'S
F		82	1	PRINCE GEORGE'S
F		91	1	PRINCE GEORGE'S
M		53	1	PRINCE GEORGE'S
<b>CANDIDA PELLICULOSA</b>				
M		62	1	BALTIMORE CITY
<b>CANDIDA TROPICALIS</b>				
M		60	1	BALTIMORE CITY
U		0	1	PRINCE GEORGE'S
F		43	1	PRINCE GEORGE'S
<b>CLADOSPORIUM SPECIES</b>				
F		55	1	CHARLES
<b>CRYPTOCOCCUS NEOFORMANS</b>				
M		49	1	BALTIMORE CITY
F		29	1	TALBOT
<b>CURVULARIA SPECIES</b>				
F		77	1	ANNE ARUNDEL
<b>FUSARIUM SPECIES</b>				
F		72	1	PRINCE GEORGE'S
<b>MYCELIA STERILIA</b>				
F		60	1	ANNE ARUNDEL
F		77	1	ANNE ARUNDEL
M		60	1	ANNE ARUNDEL
M		73	1	ANNE ARUNDEL
M		80	1	BALTIMORE CITY
<b>NOCARDIA NOVA</b>				
F		72	1	FREDERICK
F		74	1	WICOMICO
<b>PAECILOMYCES SPECIES</b>				
F		54	1	CECIL
<b>PENICILLIUM SPECIES</b>				
M		37	1	ALLEGANY

F	45	1	BALTIMORE CITY
F	54	1	BALTIMORE CITY
M	63	1	BALTIMORE CITY
SCOPULARIOPSIS SPECIES			
F	54	1	BALTIMORE CITY
STREPTOMYCES SPECIES			
F	60	1	CECIL
F	53	1	TALBOT
TRICHOPHYTON RUBRUM			
F	50	1	ALLEGANY
M	87	1	ANNE ARUNDEL
TRICHOPHYTON TONSURANS			
	0	1	TALBOT
TSUKAMURELLA SPECIES			
	60	1	BALTIMORE CITY
<b>TOTAL 112</b>			

### MYCOLOGY - SEPTEMBER

ISOLATE			
SEX	AGE	#	JURISDICTION
ASPERGILLUS CLAVATUS			
M	55	1	TALBOT
ASPERGILLUS FLAVUS			
M	76	1	ANNE ARUNDEL
ASPERGILLUS FUMIGATUS			
F	37	1	ALLEGANY
F	69	1	ALLEGANY
F	68	1	MONTGOMERY
U	57	1	PRINCE GEORGE'S
F	77	1	PRINCE GEORGE'S
F	39	1	TALBOT
M	43	2	TALBOT
M	78	1	TALBOT
ASPERGILLUS NIGER			
M	51	1	ANNE ARUNDEL
F	76	1	MONTGOMERY
F	36	1	PRINCE GEORGE'S
M	70	1	TALBOT
ASPERGILLUS USTUS			
F	51	1	ANNE ARUNDEL
CANDIDA ALBICANS			
F	29	1	ANNE ARUNDEL
F	31	1	BALTIMORE
M	66	1	BALTIMORE
F	47	1	BALTIMORE CITY
F	54	1	BALTIMORE CITY
M	24	1	BALTIMORE CITY
M	61	1	BALTIMORE CITY
M	66	1	BALTIMORE CITY
F	68	1	CALVERT
M	58	1	CALVERT
F	22	1	MONTGOMERY
F	32	1	MONTGOMERY
F	42	1	MONTGOMERY
F	63	1	MONTGOMERY
M	28	1	MONTGOMERY
M	89	1	MONTGOMERY
U	0	1	PRINCE GEORGE'S
F	61	1	PRINCE GEORGE'S
F	64	1	PRINCE GEORGE'S
F	76	1	PRINCE GEORGE'S
F	80	1	PRINCE GEORGE'S
M	55	2	PRINCE GEORGE'S
	21	1	SOMERSET
F	18	1	SOMERSET
F	19	1	SOMERSET
F	20	3	SOMERSET

F	21	1	SOMERSET
F	22	1	SOMERSET
CANDIDA FAMATA			
M	38	1	MONTGOMERY
CANDIDA GLABRATA			
M	66	1	BALTIMORE CITY
F	47	1	MONTGOMERY
M	89	1	MONTGOMERY
F	80	1	WICOMICO
CANDIDA KRUSEI			
M	66	1	BALTIMORE CITY
CANDIDA SPECIES			
M	38	1	MONTGOMERY
CHAETOMIUM SPECIES			
M	56	1	TALBOT
CHRYSOSPORIUM SPECIES			
M	53	1	MONTGOMERY
CLADOSPORIUM SPECIES			
F	71	1	CALVERT
CRYPTOCOCCUS NEOFORMANS			
F	0	1	BALTIMORE CITY
M	22	2	MONTGOMERY
M	43	1	PRINCE GEORGE'S
CURVULARIA SPECIES			
U	70	1	TALBOT
U	0	1	WICOMICO
DEMATIACEOUS FUNGI IMPERFECTI			
F	6	1	ALLEGANY
EPICOCCUM SPECIES			
M	37	1	ALLEGANY
M	19	1	BALTIMORE
EXSEROHILUM			
M	8	1	TALBOT
FUSARIUM SPECIES			
M	64	1	ANNE ARUNDEL
MICROSPORIUM CANIS			
M	58	1	BALTIMORE CITY
MYCELIA STERILIA			
M	83	1	ANNE ARUNDEL
U	71	1	BALTIMORE CITY
F	74	1	BALTIMORE CITY
M	49	1	BALTIMORE CITY
M	63	1	BALTIMORE CITY
M	76	1	BALTIMORE CITY
M	58	1	CHARLES
F	76	1	PRINCE GEORGE'S
M	8	1	TALBOT
NOCARDIA SPECIES			
F	64	1	CARROLL
PAECILOMYCES SPECIES			
F	43	1	ANNE ARUNDEL
PENICILLIUM SPECIES			
M	43	1	ANNE ARUNDEL
M	61	1	ANNE ARUNDEL
M	40	1	BALTIMORE CITY
M	58	1	CALVERT
M	58	1	CHARLES
F	47	1	MONTGOMERY
F	71	2	TALBOT
F	82	1	TALBOT
M	0	1	WICOMICO
PITHOMYCES SPECIES			
F	35	1	ALLEGANY
F	46	1	TALBOT
TRICHOPHYTON MENTAGROPHYTES			
F	6	1	ALLEGANY
TRICHOPHYTON RUBRUM			
F	32	1	TALBOT
TRICHOPHYTON TONSURANS			
	5	1	CALVERT
M	8	1	TALBOT

YEAST			
F	61	1	MONTGOMERY
M	40	1	MONTGOMERY
F	63	1	PRINCE GEORGE'S
M	68	2	PRINCE GEORGE'S
M	86	2	PRINCE GEORGE'S
<b>TOTAL 103</b>			

### PARASITOLOGY - AUGUST

GENUS/SPECIES		#	JURISDICTION
BLASTOCYSTIS HOMINIS			
		1	PRINCE GEORGE'S
		1	MONTGOMERY
		2	PRINCE GEORGE'S
		2	HOWARD
		3	MONTGOMERY
		5	MONTGOMERY
ENDOLIMAX NANA			
		3	PRINCE GEORGE'S
		4	HOWARD
		3	MONTGOMERY
		1	HOWARD
ENTAMOEBA COLI			
		1	MONTGOMERY
		1	PRINCE GEORGE'S
ENTAMOEBA HARTMANNI			
		3	MONTGOMERY
		1	CARROLL
ENTEROBIUS VERMICULARIS			
		1	FREDERICK
		1	HOWARD
GIARDIA LAMBLIA			
		2	HOWARD
IODAMOEBA BÜTSCHLI			
		3	MONTGOMERY
		1	MONTGOMERY
PLASMODIUM FALCIPARUM			
		1	OUT OF STATE
		1	BALTIMORE
		1	BALTIMORE
<b>TOTAL 42</b>			

### PARASITOLOGY - SEPTEMBER

GENUS/SPECIES		#	JURISDICTION
BLASTOCYSTIS HOMINIS			
		2	BALTIMORE CITY
		1	HOWARD
		1	MONTGOMERY
ENDOLIMAX NANA			
		1	HOWARD
		2	MONTGOMERY
		1	PRINCE GEORGE'S
		1	MONTGOMERY
		1	BALTIMORE CITY
		1	HOWARD
		1	PRINCE GEORGE'S
		1	MONTGOMERY
ENTAMOEBA COLI			
		1	BALTIMORE CITY
		1	HOWARD
		1	WASHINGTON

ENTEROBIUS VERMICULARIS		
2	SAINT MARY'S	
3	WASHINGTON	
1	ANNE ARUNDEL	
1	WICOMICO	
GIARDIA LAMBLIA		
3	HOWARD	
HOO KWORM		
1	MONTGOMERY	
HYMENOLEPIS NANA		
1	PRINCE GEORGE'S	
IODAMOEBIA BÜTSCHLII		
1	BALTIMORE CITY	
PLASMODIUM FALCIPARUM		
1	BALTIMORE CITY	
<b>TOTAL</b>	<b>30</b>	

### WATER MICROBIOLOGY - AUG

	# TESTED	# NON-COMPLIANT
COMMUNITY	3	1
NON-COMMUNITY	434	138
<b>TOTAL</b>	<b>437</b>	<b>139</b>

### WATER MICROBIOLOGY - SEPT

	# TESTED	# NON-COMPLIANT
COMMUNITY	5	1
NON-COMMUNITY	350	110
<b>TOTAL</b>	<b>355</b>	<b>111</b>

### FOOD PROTECTION - AUGUST

	TOTALS
<b>FOOD</b>	
SAMPLES	41
NOTABLE PATHOGENS:	
CAMPYLOBACTER SP.	8
LISTERIA SP.	0
SALMONELLA SP.	8

### CRABMEAT

SAMPLES	4
EXCEEDING STANDARDS <sup>1</sup>	0
NOTABLE PATHOGENS:	
LISTERIA INNOCUA	2

### SHELLFISH

SAMPLES	0
EXCEEDING STANDARDS <sup>2</sup>	0

### SHELLFISH GROWING WATERS

SAMPLES	479
<b>TOTAL SAMPLES</b>	<b>524</b>
<b>TOTAL STANDARDS EXCEEDED</b>	<b>0</b>

### FOOD PROTECTION - SEPTEMBER

	TOTALS
<b>FOOD</b>	
SAMPLES	51
NOTABLE PATHOGENS:	
CAMPYLOBACTER SP.	6
LISTERIA SP.	0
SALMONELLA SP.	9

### CRABMEAT

SAMPLES	4
EXCEEDING STANDARDS <sup>1</sup>	1
NOTABLE PATHOGENS:	
LISTERIA INNOCUA	0

### SHELLFISH

SAMPLES	0
EXCEEDING STANDARDS <sup>2</sup>	0

### SHELLFISH GROWING WATERS

SAMPLES	272
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### INFANT STOOL

CLOSTRIDIUM BOTULINUM TOXIN TYPE B	1
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### TOTAL SAMPLES

<b>TOTAL SAMPLES</b>	<b>328</b>
<b>TOTAL STANDARDS EXCEEDED</b>	<b>1</b>

### STANDARDS

<sup>1</sup> CRABMEAT FRESH	
ESCHERICHIA COLI AT < 36 MPN/100 GRAMS	
STANDARD PLATE COUNT AT < 100	

### <sup>2</sup>SHELLFISH

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

### VIRUS ISOLATION - AUGUST

ISOLATE	SEX	AGE	#	JURISDICTION
ADENOVIRUS				
M	31	1		PRINCE GEORGE'S
HERPES SIMPLEX VIRUS TYPE 1				
F	59	1		PRINCE GEORGE'S
M	29	1		BALTIMORE CITY
<b>TOTAL</b>			<b>3</b>	

### VIRUS ISOLATION - SEPTEMBER

ISOLATE	SEX	AGE	#	JURISDICTION
ADENOVIRUS				
F	5	1		HOWARD
M	80	1		MONTGOMERY
M	0	1		TALBOT
COXSACKIEVIRUS B4				
F	17	1		BALTIMORE CITY
ECHOVIRUS 30				
M	9	1		BALTIMORE CITY
HERPES SIMPLEX VIRUS TYPE 1				
F	19	1		PRINCE GEORGE'S
PARAINFLUENZA VIRUS 1				
M	82	1		BALTIMORE
M	79	1		BALTIMORE
U	28	1		BALTIMORE
PARAINFLUENZA VIRUS 2				
F	4	1		WICOMICO
PARAINFLUENZA VIRUS 3				
F	41	1		HARFORD
<b>TOTAL</b>			<b>11</b>	

### VIRAL POLYMERASE CHAIN REACTION (PCR) - AUGUST

ISOLATE	SEX	AGE	#	JURISDICTION
HERPES SIMPLEX VIRUS TYPE 1				
F	16	1		ANNE ARUNDEL
F	17	1		ANNE ARUNDEL
F	20	1		BALTIMORE CITY
F	26	1		BALTIMORE CITY
M	25	1		BALTIMORE CITY
M	29	1		BALTIMORE CITY
U	22	1		BALTIMORE CITY
F	30	1		CALVERT
M	51	1		CALVERT
F	19	1		CARROLL
F	28	1		CARROLL
U	40	1		CHARLES
F	19	1		CHARLES
U	25	1		CHARLES
F	18	1		FREDERICK
F	20	1		HOWARD
M	22	1		PRINCE GEORGE'S
F	17	1		WICOMICO
HERPES SIMPLEX VIRUS TYPE 2				
F	27	1		ALLEGANY
F	30	1		ANNE ARUNDEL
U	18	1		BALTIMORE
F	18	1		BALTIMORE
F	24	1		BALTIMORE
U	0	1		BALTIMORE CITY
U	23	2		BALTIMORE CITY
U	32	1		BALTIMORE CITY
U	34	1		BALTIMORE CITY
F	19	1		BALTIMORE CITY
F	21	1		BALTIMORE CITY
F	23	1		BALTIMORE CITY
F	27	1		BALTIMORE CITY
F	28	1		BALTIMORE CITY
F	29	1		BALTIMORE CITY
F	41	1		BALTIMORE CITY
F	52	1		BALTIMORE CITY
F	63	1		BALTIMORE CITY
M	0	1		BALTIMORE CITY
M	21	1		BALTIMORE CITY
M	22	1		BALTIMORE CITY
M	24	2		BALTIMORE CITY
M	36	1		BALTIMORE CITY
M	44	1		BALTIMORE CITY
M	49	1		BALTIMORE CITY
U	18	1		BALTIMORE CITY
U	42	1		BALTIMORE CITY
F	21	1		CHARLES
F	49	1		DORCHESTER
F	52	1		DORCHESTER
F	22	1		FREDERICK
F	26	1		FREDERICK
F	30	1		FREDERICK
F	40	1		FREDERICK
M	39	1		FREDERICK
F	23	1		HARFORD
M	31	1		MONTGOMERY
F	16	1		PRINCE GEORGE'S
M	56	1		PRINCE GEORGE'S
M	32	1		SOMERSET
M	24	1		WICOMICO
INFLUENZA A(H1N1) NOVEL A				
F	1	1		ALLEGANY
F	12	1		ALLEGANY

F	26	1	ALLEGANY
F	46	1	BALTIMORE
F	9	1	BALTIMORE
M	3	1	BALTIMORE
M	33	2	BALTIMORE
U	4	1	BALTIMORE CITY
U	55	1	BALTIMORE CITY
F	0	1	BALTIMORE CITY
F	15	2	BALTIMORE CITY
F	20	1	BALTIMORE CITY
F	24	2	BALTIMORE CITY
F	27	1	BALTIMORE CITY
F	37	1	BALTIMORE CITY
F	6	1	BALTIMORE CITY
F	9	1	BALTIMORE CITY
M	1	2	BALTIMORE CITY
M	13	1	BALTIMORE CITY
M	16	1	BALTIMORE CITY
M	22	1	BALTIMORE CITY
M	24	1	BALTIMORE CITY
M	33	1	BALTIMORE CITY
M	45	1	BALTIMORE CITY
M	5	1	BALTIMORE CITY
M	7	2	BALTIMORE CITY
M	8	1	BALTIMORE CITY
M	0	1	CALVERT
F	41	1	CHARLES
M	50	1	CHARLES
F	3	1	FREDERICK
F	30	1	FREDERICK
F	4	1	FREDERICK
F	41	1	FREDERICK
M	1	1	FREDERICK
M	30	1	FREDERICK
M	4	1	FREDERICK
M	7	1	HARFORD
F	0	1	MONTGOMERY
F	21	1	MONTGOMERY
F	46	1	MONTGOMERY
F	9	1	MONTGOMERY
M	2	1	MONTGOMERY
U	16	2	OUT OF STATE
F	0	1	OUT OF STATE
F	11	1	OUT OF STATE
F	26	1	OUT OF STATE
F	33	1	OUT OF STATE
F	35	1	OUT OF STATE
F	38	1	OUT OF STATE
F	4	1	OUT OF STATE
F	46	1	OUT OF STATE
F	8	1	OUT OF STATE
M	10	1	OUT OF STATE
M	11	1	OUT OF STATE
M	12	1	OUT OF STATE
M	13	1	OUT OF STATE
M	20	1	OUT OF STATE
M	3	1	OUT OF STATE
M	49	1	OUT OF STATE
M	5	1	OUT OF STATE
M	50	1	OUT OF STATE
M	52	1	OUT OF STATE
M	58	1	OUT OF STATE
M	6	1	OUT OF STATE
U	19	1	PRINCE GEORGE'S
F	0	1	PRINCE GEORGE'S
F	11	1	PRINCE GEORGE'S
F	19	1	PRINCE GEORGE'S
F	21	1	PRINCE GEORGE'S
F	24	1	PRINCE GEORGE'S
F	32	1	PRINCE GEORGE'S
F	39	1	PRINCE GEORGE'S

F	50	1	PRINCE GEORGE'S
F	76	1	PRINCE GEORGE'S
M	11	1	PRINCE GEORGE'S
M	23	1	PRINCE GEORGE'S
M	4	1	PRINCE GEORGE'S
M	6	1	PRINCE GEORGE'S
M	8	1	PRINCE GEORGE'S
F	24	1	SAINT MARY'S
M	16	1	SAINT MARY'S
M	26	1	SAINT MARY'S
M	9	1	TALBOT
F	1	1	WICOMICO
F	4	1	WICOMICO
F	7	1	WICOMICO
M	0	1	WICOMICO
M	17	1	WORCESTER
INFLUENZA A(H3)			
F	40	1	OUT OF STATE

**TOTAL 157**

**VIRAL POLYMERASE CHAIN REACTION (PCR) - SEPTEMBER**

ISOLATE

SEX AGE # JURISDICTION

HERPES SIMPLEX VIRUS TYPE 1

F	26	1	ALLEGANY
M	22	1	ALLEGANY
F	18	1	BALTIMORE CITY
F	20	1	BALTIMORE CITY
F	28	1	CALVERT
F	28	1	CHARLES
M	21	1	CHARLES
F	17	1	PRINCE GEORGE'S
F	19	2	PRINCE GEORGE'S
F	26	1	PRINCE GEORGE'S
M	20	1	PRINCE GEORGE'S
F	19	1	WICOMICO
F	20	1	WICOMICO

HERPES SIMPLEX VIRUS TYPE 2

F	24	2	ANNE ARUNDEL
F	25	1	ANNE ARUNDEL
F	25	1	BALTIMORE
F	33	1	BALTIMORE
F	40	1	BALTIMORE
U	21	1	BALTIMORE CITY
F	0	1	BALTIMORE CITY
F	16	1	BALTIMORE CITY
F	21	1	BALTIMORE CITY
F	22	1	BALTIMORE CITY
F	24	2	BALTIMORE CITY
F	26	1	BALTIMORE CITY
F	29	2	BALTIMORE CITY
F	39	1	BALTIMORE CITY
F	68	1	BALTIMORE CITY
M	0	1	BALTIMORE CITY
M	21	1	BALTIMORE CITY
M	22	1	BALTIMORE CITY
M	23	1	BALTIMORE CITY
M	24	1	BALTIMORE CITY
M	25	1	BALTIMORE CITY
M	31	1	BALTIMORE CITY
M	34	1	BALTIMORE CITY
M	37	2	BALTIMORE CITY
M	56	1	BALTIMORE CITY
F	30	1	CALVERT
M	25	1	CALVERT

F	19	2	CARROLL
F	27	1	CHARLES
F	32	1	CHARLES
F	17	1	FREDERICK
F	26	1	FREDERICK
M	55	1	FREDERICK
U	23	1	HARFORD
M	31	1	HARFORD
F	39	1	HOWARD
U	32	1	MONTGOMERY
F	21	1	MONTGOMERY
M	32	1	MONTGOMERY
F	23	1	PRINCE GEORGE'S
F	25	1	PRINCE GEORGE'S
F	29	1	PRINCE GEORGE'S
F	36	1	PRINCE GEORGE'S
M	21	1	PRINCE GEORGE'S
M	43	1	PRINCE GEORGE'S
F	20	1	SAINT MARY'S
F	15	1	SOMERSET
F	57	1	UNKNOWN
F	17	1	WICOMICO
M	22	1	WICOMICO
INFLUENZA A(H1/N1) NOVEL A			
U	8	1	ALLEGANY
F	18	1	ALLEGANY
F	2	1	ALLEGANY
M	18	1	ALLEGANY
M	19	1	ALLEGANY
M	46	1	ALLEGANY
F	14	1	ANNE ARUNDEL
F	58	1	ANNE ARUNDEL
M	52	1	ANNE ARUNDEL
M	55	1	ANNE ARUNDEL
F	14	1	BALTIMORE
F	16	1	BALTIMORE
F	18	8	BALTIMORE
F	19	6	BALTIMORE
F	20	12	BALTIMORE
F	22	1	BALTIMORE
F	23	1	BALTIMORE
F	27	1	BALTIMORE
F	66	1	BALTIMORE
M	15	1	BALTIMORE
M	17	2	BALTIMORE
M	18	6	BALTIMORE
M	19	4	BALTIMORE
M	20	3	BALTIMORE
M	21	1	BALTIMORE
M	22	1	BALTIMORE
M	23	1	BALTIMORE
M	24	1	BALTIMORE
M	37	1	BALTIMORE
U	0	1	BALTIMORE CITY
U	5	1	BALTIMORE CITY
F	0	2	BALTIMORE CITY
F	1	1	BALTIMORE CITY
F	10	2	BALTIMORE CITY
F	11	1	BALTIMORE CITY
F	12	3	BALTIMORE CITY
F	13	3	BALTIMORE CITY
F	14	1	BALTIMORE CITY
F	16	2	BALTIMORE CITY
F	17	1	BALTIMORE CITY
F	18	1	BALTIMORE CITY
F	2	1	BALTIMORE CITY
F	21	1	BALTIMORE CITY
F	25	2	BALTIMORE CITY
F	28	1	BALTIMORE CITY
F	3	3	BALTIMORE CITY
F	43	1	BALTIMORE CITY

F	44	1	BALTIMORE CITY
F	52	1	BALTIMORE CITY
F	6	1	BALTIMORE CITY
F	7	1	BALTIMORE CITY
M	1	1	BALTIMORE CITY
M	10	2	BALTIMORE CITY
M	11	1	BALTIMORE CITY
M	12	2	BALTIMORE CITY
M	13	2	BALTIMORE CITY
M	17	2	BALTIMORE CITY
M	18	1	BALTIMORE CITY
M	20	1	BALTIMORE CITY
M	23	1	BALTIMORE CITY
M	24	1	BALTIMORE CITY
M	26	1	BALTIMORE CITY
M	29	1	BALTIMORE CITY
M	43	2	BALTIMORE CITY
M	44	1	BALTIMORE CITY
M	53	1	BALTIMORE CITY
M	70	1	BALTIMORE CITY
F	10	1	CALVERT
F	11	1	CALVERT
F	20	1	CALVERT
F	32	1	CALVERT
F	9	1	CALVERT
M	15	1	CALVERT
M	25	1	CALVERT
F	10	1	CECIL
F	11	1	CHARLES
F	2	1	CHARLES
M	17	1	CHARLES
M	36	1	CHARLES
M	6	1	CHARLES
F	19	1	FREDERICK
M	10	1	FREDERICK
M	17	1	FREDERICK
F	15	1	GARRETT
F	57	1	HARFORD
F	21	1	KENT
F	31	1	MONTGOMERY
U	16	1	PRINCE GEORGE'S
F	0	1	PRINCE GEORGE'S
F	1	1	PRINCE GEORGE'S
F	12	1	PRINCE GEORGE'S
F	13	1	PRINCE GEORGE'S
F	15	1	PRINCE GEORGE'S
F	16	1	PRINCE GEORGE'S
F	18	1	PRINCE GEORGE'S
F	20	1	PRINCE GEORGE'S
F	22	1	PRINCE GEORGE'S
F	26	1	PRINCE GEORGE'S
F	41	1	PRINCE GEORGE'S
F	46	1	PRINCE GEORGE'S
F	49	1	PRINCE GEORGE'S
F	58	1	PRINCE GEORGE'S
M	0	1	PRINCE GEORGE'S
M	1	1	PRINCE GEORGE'S
M	10	2	PRINCE GEORGE'S
M	16	1	PRINCE GEORGE'S
M	17	1	PRINCE GEORGE'S
M	18	3	PRINCE GEORGE'S
M	19	2	PRINCE GEORGE'S
M	20	2	PRINCE GEORGE'S
M	24	1	PRINCE GEORGE'S
M	40	1	PRINCE GEORGE'S
M	56	1	PRINCE GEORGE'S
M	6	1	PRINCE GEORGE'S
M	7	1	PRINCE GEORGE'S
M	8	1	PRINCE GEORGE'S
F	10	1	SAINT MARY'S
F	11	3	SAINT MARY'S

F	12	1	SAINT MARY'S
F	13	1	SAINT MARY'S
F	18	1	SAINT MARY'S
F	19	1	SAINT MARY'S
F	2	1	SAINT MARY'S
F	28	2	SAINT MARY'S
F	3	1	SAINT MARY'S
F	30	1	SAINT MARY'S
F	36	1	SAINT MARY'S
F	40	1	SAINT MARY'S
F	47	1	SAINT MARY'S
F	5	1	SAINT MARY'S
F	6	1	SAINT MARY'S
M	10	1	SAINT MARY'S
M	11	2	SAINT MARY'S
M	12	2	SAINT MARY'S
M	13	2	SAINT MARY'S
M	14	2	SAINT MARY'S
M	15	1	SAINT MARY'S
M	18	1	SAINT MARY'S
M	2	1	SAINT MARY'S
M	5	2	SAINT MARY'S
M	7	1	SAINT MARY'S
F	51	1	TALBOT
M	11	1	TALBOT
U	12	1	WICOMICO
F	0	1	WICOMICO
F	18	2	WICOMICO
F	19	5	WICOMICO
F	20	1	WICOMICO
F	4	1	WICOMICO
F	5	1	WICOMICO
F	7	1	WICOMICO
M	0	1	WICOMICO
M	11	1	WICOMICO
M	12	1	WICOMICO
M	19	2	WICOMICO
M	21	2	WICOMICO
M	22	2	WICOMICO
M	25	1	WICOMICO
M	4	2	WICOMICO
M	7	1	WICOMICO
F	1	1	WORCESTER
M	32	1	WORCESTER
M	4	1	WORCESTER
M	8	1	WORCESTER
INFLUENZA A(H3)			
M	1	1	BALTIMORE CITY

**TOTAL 305**

**VIRAL HEPATITIS - AUG 2009**

ORGANISM	# SPECIMENS	# POSITIVES	JURISDICTION
HEPATITIS A	1	0	ANNE ARUNDEL
	1	0	CARROLL
<b>SUBTOTAL</b>	<b>2</b>	<b>0</b>	
HEPATITIS B	50	0	ALLEGANY
	153	4	ANNE ARUNDEL
	48	1	BALTIMORE
	443	9	BALTIMORE CITY
	7	0	CALVERT

17	1	CARROLL
145	1	CECIL
4	0	CHARLES
67	2	FREDERICK
11	0	GARRETT
46	1	HARFORD
28	1	HOWARD
1	0	KENT
266	5	MONTGOMERY
269	4	PRINCE GEORGE'S
9	0	QUEEN ANNE'S
3	0	SAINT MARY'S
1	0	SOMERSET
19	0	TALBOT
21	1	WASHINGTON
77	0	WICOMICO

**SUBTOTAL 1,685 30**

**HEPATITIS C**

46	3	ALLEGANY
165	40	ANNE ARUNDEL
54	3	BALTIMORE
242	68	BALTIMORE CITY
6	0	CALVERT
14	2	CARROLL
75	5	CECIL
6	0	CHARLES
79	1	FREDERICK
17	0	GARRETT
28	2	HARFORD
1	0	KENT
20	3	MONTGOMERY
152	4	PRINCE GEORGE'S
3	0	QUEEN ANNE'S
6	0	SAINT MARY'S
4	0	SOMERSET
18	0	TALBOT
1	1	UNKNOWN
2	1	WASHINGTON
5	0	WICOMICO

**SUBTOTAL 944 133**

**TOTALS 2,631 163**

**VIRAL HEPATITIS - SEPT 2009**

ORGANISM	# SPECIMENS	# POSITIVES	JURISDICTION
HEPATITIS A	1	0	CECIL
	1	0	PRINCE GEORGE'S
<b>SUBTOTAL</b>	<b>2</b>	<b>0</b>	
HEPATITIS B	52	0	ALLEGANY
	161	3	ANNE ARUNDEL
	48	0	BALTIMORE
	530	7	BALTIMORE CITY
	6	0	CALVERT
	8	0	CARROLL
	144	3	CECIL

9	0	CHARLES
53	1	FREDERICK
9	0	GARRETT
44	0	HARFORD
13	0	HOWARD
327	10	MONTGOMERY
327	8	PRINCE GEORGE'S
4	0	QUEEN ANNE'S
2	0	SAINT MARY'S
4	0	SOMERSET
15	0	TALBOT
1	0	UNKNOWN
31	1	WASHINGTON
86	0	WICOMICO

**SUBTOTAL**  
1,874 33

**HEPATITIS C**

47	10	ALLEGANY
170	44	ANNE ARUNDEL
54	3	BALTIMORE
328	90	BALTIMORE CITY
4	0	CALVERT
10	1	CARROLL
87	17	CECIL
11	1	CHARLES
51	2	FREDERICK
10	0	GARRETT
40	4	HARFORD
1	0	HOWARD
47	4	MONTGOMERY
164	2	PRINCE GEORGE'S
3	0	QUEEN ANNE'S
4	1	SAINT MARY'S
4	0	SOMERSET
15	0	TALBOT
2	0	UNKNOWN
9	0	WASHINGTON
12	1	WICOMICO

**SUBTOTALS**  
1,073 180

**TOTALS**  
2,949 213

**RABIES - AUGUST 2009**

SOURCE	#	JURISDICTION
BAT	6	ANNE ARUNDEL
	6	BALTIMORE CITY
	1	BALTIMORE
	1	CAROLINE
	2	FREDERICK
	4	MONTGOMERY
	8	PRINCE GEORGES
	2	WASHINGTON
CAT	1	ANNE ARUNDEL
	1	MONTGOMERY
FOX	1	ALLEGANY
	2	MONTGOMERY
	1	PRINCE GEORGES
	2	WORCESTER
GROUND HOG	1	MONTGOMERY

RACCOON	1	CAROLINE
	2	CARROLL
	1	DORCHESTER
	2	HOWARD
	1	MONTGOMERY
	1	SOMERSET
	1	TALBOT
	1	WASHINGTON
	2	WORCESTER
SKUNK	1	ALLEGANY
	1	MONTGOMERY
	1	QUEEN ANNES

**TOTAL POSITIVES** 54

**TOTAL SPECIMENS** 629

**RABIES - SEPTEMBER 2009**

SOURCE	#	JURISDICTION
BAT	3	BALTIMORE CITY
	1	BALTIMORE
	1	CECIL
	1	CHARLES
	1	HARFORD
	4	PRINCE GEORGES
CAT	1	CALVERT
	1	DORCHESTER
FOX	1	CARROLL
	1	CECIL
	1	HOWARD
	1	MONTGOMERY
	1	PRINCE GEORGES
	1	SAINT MARY'S
GROUND HOG	1	MONTGOMERY
RACCOON	1	BALTIMORE CITY
	1	CARROLL
	1	CECIL
	1	DORCHESTER
	1	FREDERICK
	2	GARRETT
	1	HOWARD
	4	MONTGOMERY
	1	WASHINGTON
	1	WICOMICO
	9	WORCESTER
SKUNK	1	WASHINGTON
	1	WICOMICO

**TOTAL POSITIVES** 45

**TOTAL SPECIMENS** 421

**CHLAMYDIOPHILIA PSITTACI (CHLAMYDIA)**

REPORTED QUARTERLY  
NO REPORT FOR AUGUST 2009

**CHLAMYDIOPHILIA PSITTACI (CHLAMYDIA)**

REPORTED QUARTERLY  
NONE REPORTED FOR 7/1/09 TO 9/30/09

**CD4 FLOW CYTOMETRY WORKLOAD**

REPORTED QUARTERLY  
NO REPORT FOR AUGUST 2009

**CD4 FLOW CYTOMETRY WORKLOAD**

REPORTED QUARTERLY  
COMPARING CURRENT QUARTER TO  
SAME QUARTER LAST YEAR

DATES	Level 1	Level 2	Level 3	TOTAL
	<14%	14%-28%	≥29%	
7/01/09 THROUGH 9/30/09	161	460	302	923
7/01/08 THROUGH 9/30/08	260	481	283	1024

**BLOOD LEAD - AUGUST 2009**

MARYLAND		
I	<10	173
IIA	10-14	8
IIB	15-19	3
III	20-44	8
IV	45-69	2
V	>69	0
<b>TOTAL</b>		<b>194</b>

WASHINGTON DC		
I	<10	0
IIA	10-14	0
IIB	15-19	0
III	20-44	0
IV	45-69	0
V	>69	0
<b>TOTAL</b>		<b>0</b>

**BLOOD LEAD - SEPTEMBER 2009**

MARYLAND		
I	<10	102
IIA	10-14	6
IIB	15-19	5
III	20-44	9
IV	45-69	0
V	>69	0
<b>TOTAL</b>		<b>122</b>

WASHINGTON DC		
I	<10	0
IIA	10-14	0
IIB	15-19	0
III	20-44	0
IV	45-69	0
V	>69	0
<b>TOTAL</b>		<b>0</b>

## NEWBORN & CHILDHOOD SCREENING

STATISTICS FOR AUGUST 2009

PRESUMPTIVE POSITIVES	
DISORDERS	#
<b>PHENYLKETONURIA</b>	6
MAPLE SYRUP URINE DISEASE	4
HOMOCYSTINURIA	13
TYROSINEMIA	9
ARGININEMIA	0
CITRULLINEMIA	0
GALACTOSEMIA	1
BIOTINIDASE DEFICIENCY	0
HYPOTHYROIDISM	111
HEMOGLOBIN -DISEASE	23
HEMOGLOBIN -BENIGN	523
CONGENITAL ADRENAL HYPERPLASIA (CAH)	47
CYSTIC FIBROSIS	4
FATTY ACID OXIDATIONS	2
ORGANIC ACIDEMIAS	11
ACYLCARNITINE - BORDERLINE	0
ACYLCARNITINE - OTHERS	0

MONTHLY TOTALS	
# OF SPECIMENS SCREENED	12,958
NUMBER OF TESTS	928,022
% UNSATISFACTORY SPECIMENS	2

### YEAR-TO-DATE CONFIRMED CASES

CONDITIONS	# CONFIRMED
MCAD	3
3MCC	1
SCAD	1
VLCAD	0
GA-I	0
IVA	1
MMA	1
PA	0
ARGININOSUCINATE LYASE DEFICIENCY (ASA)	1
VARIANT HYPERPHENYLALANINEMIA (NOT CLINICALLY SIGNIFICANT)	3
CITRULINEMIA I (CIT-I)	1
CITRIN DEFICIENCY	1
GALACTOSEMIA-CLASSICAL GALT DEFICIENCY	1
HYPOTHYROIDISM - PRIMARY	26
OTHER HYPOTHYROIDISM	8
SECONDARY HYPOTHYROIDISM	1
SICKLE CELL DISEASE -SS	44
SICKLE CELL DISEASE -SC	27
SICKLE CELL DISEASE -CC	6
SICKLE CELL DISEASE -VARIANT	3
FV DISEASE	4
CYSTIC FIBROSIS	13

## NEWBORN & CHILDHOOD SCREENING

STATISTICS FOR SEPTEMBER 2009

PRESUMPTIVE POSITIVES	
DISORDERS	#
<b>PHENYLKETONURIA</b>	3
MAPLE SYRUP URINE DISEASE	4
HOMOCYSTINURIA	7
TYROSINEMIA	6
ARGININEMIA	0
CITRULLINEMIA	1
GALACTOSEMIA	3
BIOTINIDASE DEFICIENCY	1
HYPOTHYROIDISM	71
HEMOGLOBIN -DISEASE	26
HEMOGLOBIN -BENIGN	547
CONGENITAL ADRENAL HYPERPLASIA (CAH)	36
CYSTIC FIBROSIS	4
FATTY ACID OXIDATIONS	5
ORGANIC ACIDEMIAS	12
ACYLCARNITINE - BORDERLINE	11
ACYLCARNITINE - OTHERS	0

MONTHLY TOTALS	
# OF SPECIMENS SCREENED	13,406
NUMBER OF TESTS	1,111,895
% UNSATISFACTORY SPECIMENS	2

### YEAR-TO-DATE CONFIRMED CASES

CONDITIONS	# CONFIRMED
MCAD	3
3MCC	2
SCAD	4
VLCAD	1
IVA	1
MMA	1
PA	0
ARGININOSUCINATE LYASE DEFICIENCY (ASA)	1
VARIANT HYPERPHENYLALANINEMIA (NOT CLINICALLY SIGNIFICANT)	3
CITRULINEMIA I (CIT-I)	1
CITRIN DEFICIENCY	1
GALACTOSEMIA-CLASSICAL GALT DEFICIENCY	1
GALACTOSE EPIMERASE DEFICIENCY	1
HYPOTHYROIDISM - PRIMARY	26
OTHER HYPOTHYROIDISM	8
SECONDARY HYPOTHYROIDISM	1
SICKLE CELL DISEASE -SS	44
SICKLE CELL DISEASE -SC	27
SICKLE CELL DISEASE -CC	6
SICKLE CELL DISEASE -VARIANT	3
FV DISEASE	4
CYSTIC FIBROSIS	13

## ENVIRONMENTAL CHEMISTRY AUG

SAMPLE TYPES	# NON-COMPLIANT	# TESTED
ASBESTOS		
AIR	0	0
BULK	3	19
AIR QUALITY		
PM <sub>2.5</sub>	0	172
RADIATION		
AIR/CHARCOAL FILTERS	0	64
MILK	0	1
WIPES	0	188
RAW WATER	0	7
VEGETATION	0	0
OTHER	0	0
DRINKING WATER		
METALS		
COMMUNITY	7	12
NON-COMMUNITY	4	21
PRIVATE WELLS	52	157
PESTICIDES & PCBs		
COMMUNITY	0	41
NON-COMMUNITY	0	20
PRIVATE WELLS	0	54
VOLATILE ORGANIC COMPOUNDS		
COMMUNITY	7	235
NON-COMMUNITY	0	38
PRIVATE WELLS	4	183
RADIATION		
COMMUNITY	2	52
NON-COMMUNITY	0	0
PRIVATE WELLS	0	7
INORGANICS		
COMMUNITY	0	32
NON-COMMUNITY	5	34
PRIVATE WELLS	3	218
FOOD CHEMISTRY		
SUSPECTED TAMPERING	0	0
MICROSCOPIC FILTH	0	0
LABELING	0	0
SURVEILLANCE	0	6
CHEMICAL CONTAMINATION	0	0
<b>TOTAL</b>	<b>87</b>	<b>1,561</b>

**ENVIRONMENTAL CHEMISTRY SEPT**

SAMPLE TYPES	# NON-COMPLIANT	# TESTED
ASBESTOS		
AIR	0	0
BULK	7	28
AIR QUALITY		
PM 2.5	0	643
RADIATION		
AIR/CHARCOAL FILTERS	0	72
MILK	0	0
WIPES	0	158
RAW WATER	0	7
VEGETATION	0	0
OTHER	0	1
DRINKING WATER		
METALS		
COMMUNITY	7	17
NON-COMMUNITY	7	19
PRIVATE WELLS	59	210
PESTICIDES & PCBs		
COMMUNITY	0	18
NON-COMMUNITY	0	33
PRIVATE WELLS	0	24
VOLATILE ORGANIC COMPOUNDS		
COMMUNITY	1	155
NON-COMMUNITY	0	59
PRIVATE WELLS	1	141
RADIATION		
COMMUNITY	1	41
NON-COMMUNITY	0	0
PRIVATE WELLS	0	4
INORGANICS		
COMMUNITY	0	11
NON-COMMUNITY	1	34
PRIVATE WELLS	8	154
FOOD CHEMISTRY		
SUSPECTED TAMPERING	0	0
MICROSCOPIC FILTH	0	0
LABELING	0	0
SURVEILLANCE	0	0
CHEMICAL CONTAMINATION	0	0
<b>TOTAL</b>	<b>92</b>	<b>1,829</b>

**HIV ANTIBODY SCREENING - AUGUST 2009**

SUBMITTER	TOTAL SPECIMENS	# EIA POSITIVE	% EIA POSITIVE	# WB POSITIVE	% WB POSITIVE
CORRECTIONAL INSTITUTIONS	388	7	1.80%	6	85.71%
FAMILY PLANNING (NON-GOVT)	76	0	0.00%	0	0.00%
HEALTH CENTERS (NON-GOVT)	537	42	7.82%	38	90.48%
HEALTH DEPT, NON-STD, FP	470	2	0.43%	1	50.00%
HEALTH DEPT, NON-STD, OB/GYN	56	0	0.00%	0	0.00%
HEALTH DEPT, NON-STD, OTHER	744	51	6.85%	49	96.08%
HEALTH DEPT, STD CLINICS	892	17	1.91%	14	82.35%
HOSPITAL, OTHER	94	6	6.38%	6	100.00%
HOSPITAL, PUBLIC	20	0	0.00%	0	0.00%
JUVENILE SERVICES	27	0	0.00%	0	0.00%
LABORATORIES (NON-HOSPITAL)	327	16	4.89%	10	62.50%
PEDIATRIC - CHILD HEALTH	6	0	0.00%	0	0.00%
PRIVATE PHYSICIANS	5	0	0.00%	0	0.00%
PRIVATE STUDENT HEALTH CTRS	10	0	0.00%	0	0.00%
PUBLIC STUDENT HEALTH CTRS	18	0	0.00%	0	0.00%
OTHER	1	0	0.00%	0	0.00%
<b>TOTALS</b>	<b>3,671</b>	<b>141</b>	<b>3.84%</b>	<b>124</b>	<b>87.94%</b>

**HIV ANTIBODY SCREENING - SEPTEMBER 2009**

SUBMITTER	TOTAL SPECIMENS	# EIA POSITIVE	% EIA POSITIVE	# WB POSITIVE	% WB POSITIVE
CORRECTIONAL INSTITUTIONS	84	1	1.19%	1	100.00%
FAMILY PLANNING (NON-GOVT)	87	0	0.00%	0	0.00%
HEALTH CENTERS (NON-GOVT)	549	53	9.65%	51	96.23%
HEALTH DEPT, NON-STD, FP	427	2	0.47%	1	50.00%
HEALTH DEPT, NON-STD, OB/GYN	89	0	0.00%	0	0.00%
HEALTH DEPT, NON-STD, OTHER	543	49	9.02%	48	97.96%
HEALTH DEPT, STD CLINICS	926	10	1.08%	9	90.00%
HOSPITAL, OTHER	141	10	7.09%	10	100.00%
HOSPITAL, PUBLIC	10	0	0.00%	0	0.00%
JUVENILE SERVICES	62	1	1.61%	0	0.00%
LABORATORIES (NON-HOSPITAL)	388	20	5.15%	13	65.00%
PEDIATRIC - CHILD HEALTH	1	0	0.00%	0	0.00%
PRIVATE PHYSICIANS	1	0	0.00%	0	0.00%
PRIVATE STUDENT HEALTH CTRS	12	0	0.00%	0	0.00%
PUBLIC STUDENT HEALTH CTRS	38	0	0.00%	0	0.00%
OTHER	262	1	0.38%	0	0.00%
<b>TOTALS</b>	<b>3,620</b>	<b>147</b>	<b>4.06%</b>	<b>133</b>	<b>90.48%</b>

**VIRAL LOAD SPECIMENS - AUGUST 2009**

HIV-1 RNA COPIES/ML	<10 <sup>3</sup>	10 <sup>3</sup> –10 <sup>4</sup>	10 <sup>4</sup> –10 <sup>5</sup>	>10 <sup>5</sup>	TOTALS
ALLEGANY	6	3	2	0	11
CARROLL	1	0	1	0	2
FREDERICK	5	0	2	0	7
MONTGOMERY	75	6	16	1	98
PRINCE GEORGE'S	87	15	10	3	115
SOMERSET	1	0	1	0	2
WASHINGTON	4	2	1	0	7
SUBTOTALS	179	26	33	4	242
DEPARTMENT OF CORRECTIONS	9	4	2	3	18
<b>TOTALS</b>	<b>188</b>	<b>30</b>	<b>35</b>	<b>7</b>	<b>260</b>

**VIRAL LOAD SPECIMENS - SEPTEMBER 2009**

HIV-1 RNA COPIES/ML	<10 <sup>3</sup>	10 <sup>3</sup> –10 <sup>4</sup>	10 <sup>4</sup> –10 <sup>5</sup>	>10 <sup>5</sup>	TOTALS
ALLEGANY	11	2	1	0	14
BALTIMORE	0	0	1	0	1
FREDERICK	1	1	0	0	2
MONTGOMERY	75	15	9	3	102
PRINCE GEORGE'S	77	17	12	1	107
SOMERSET	0	1	0	0	1
WASHINGTON	2	0	0	0	2
WICOMICO	1	0	1	0	2
SUBTOTALS	167	36	24	4	231
DEPARTMENT OF CORRECTIONS	21	5	6	0	32
<b>TOTALS</b>	<b>188</b>	<b>41</b>	<b>30</b>	<b>4</b>	<b>263</b>



MAILING LABEL

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