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## Welcome to the Winter 2012 Saturday DNA! programs!

At the science scene on Saturdays learn about

### Genetic...

Imprinting  
Selection  
Mutation

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Join us for exciting, new  
**Saturday DNA!** sessions!

### Add some DNA to your day . . .

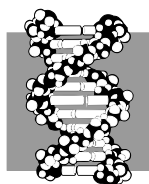
One session is offered for each Saturday in this newsletter. The January and March sessions are for students ages 14 to adult with accompanying chaperone for participants under 15. The February session is for ages 10-13 with an accompanying chaperone. **All sessions are two hours long: 1:00 - 3:00 p.m.** Chaperones fully participate in all program activities.

Sessions are \$15.00 per person (\$30.00 for a participating student and accompanying chaperone.)□

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### What you need to do:

- You must read and follow the instructions on the **Reservation Guidelines**. Applications not adhering to these guidelines will be returned.
- **Download** reservation form(s) from the Saturday DNA! link on our website at **www.dnalc.org**.
- Reserve your space by completing and returning a reservation form with your payment. You must include a separate check for each session you plan to attend.



### DNA Learning Center

**Mailing  
Address:**

DNA Learning Center  
Cold Spring Harbor Laboratory  
One Bungtown Road  
Cold Spring Harbor, NY 11724

**Location  
of Event:**

DNA Learning Center  
334 Main Street  
Cold Spring Harbor, NY 11724

**Directions** to the DNA Learning Center and **Reservation Guidelines** are on the website at:  
**www.dnalc.org**

## DNA Learning Center's

# SATURDAY DNA

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**Saturday, January 14, 2012**

### **When Genes are Switched Off...**

1:00 – 3:00 p.m.

Ages 14 – Adult, under 15 years chaperone required

For most genes in mammals and flowering plants, two working copies are inherited – one from mom and one from dad. Some genes act a bit differently, where only one working copy of a gene is inherited. This is called genetic imprinting. Come see how genes are regulated through different processes in cells and how they affect the development of an organism.

In this session, participants will:

- look into factors that help regulate the expression of genes;
- see the effect of imprinted genes on the development of an organism;
- test DNA for gene regulation in a living organism.

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**Saturday, February 11, 2012**

### **Selection Detection**

1:00 – 3:00 p.m.

Ages 10-13, with chaperone

In 1842, Charles Darwin began sketching his theories of evolution and natural selection for his book, *On the Origin of Species*. Darwin, the “father” of evolutionary theory, was born on February 12, 1809. On the eve of his birthday, we will explore how his theories work in nature today.

In this session, participants will:

- demonstrate how selection and different selective pressures can drive evolution;
- “become the predators” to understand the role of prey selection and survival of the fittest;
- discuss modern examples of Darwin’s theory of evolution.

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**Saturday, March 10, 2012**

### **Genetics of HIV Resistance**

1:00 – 3:00 p.m.

Ages 14 – Adult, under 15 years chaperone required

An American leukemia patient living in Berlin received a bone marrow transplant that also cured his AIDS. In a world where 33.4 *million* people are HIV positive, there are a lucky few who are genetically predisposed to resist HIV infection. Come learn about the protective mutation, how we can test for it, and how scientists hope to use gene therapy to treat infected patients.

In this lab session, participants will:

- learn about how we examine genomes for the resistance mutation;
- perform a mock genotype.