

# The TOPS Genome Registry Lengthens a Lasting Legacy

Learn More at International Recognition Days

Every week at chapter, TOPS members meet to help each other along in our individual weight-loss journeys. We discuss triumphs and challenges, what's working for us and what's not.

But did you know that, for decades, our organization has brought together national leaders in obesity research to find scientific answers to these questions?



TOPS President Barbara Cady with Dr. Michael Olivier (left) and Dr. Anthony Comuzzie (right), directors of the TOPS Nutrition and Obesity Research Center at Texas Biomed.

In 1966, TOPS contributed \$250,000 (\$1.66 million in today's dollars) to begin the Obesity and Metabolic Research Program at the Medical College of Wisconsin. Now, TOPS had added another research partnership, with the Texas Biomedical Research Institute at the TOPS Nutrition and Obesity Research Center, established in June 2015 to study the causes, health risks and treatment of obesity through genetic research.

Now, we are excited to tell you more about the TOPS Genome Registry, which builds on TOPS' 50+ year commitment to supporting research that forwards the understanding and treatment of obesity and related conditions affecting our members. Using advances in technology to start our second genome project, we're collecting new samples to understand even more. To learn about this initiative, and to complete the initial electronic survey, visit www.topsgenome.org.

Doctors Michael Olivier and Anthony Comuzzie will present an overview of the TOPS Genome Registry at this year's IRD and tell you how you can get involved in this exciting new research. Here's a sneak preview they shared with TOPS News:

#### **TN:** How did you find yourself in the field of obesity research?

Dr. Michael Olivier: Purely by chance. I was studying cardiovascular disease and lipid abnormalities [risk factors for heart disease]. I found that my passion for problem-solving led me to opportunities in obesity research. I like that my biomedical research has a direct impact for people struggling with weight gain.

Dr. Anthony Comuzzie: Much like Michael, I did not set out to specifically pursue obesity research. Back in the early '90s, I was beginning my training in genetic epidemiology [genetic factors contributing to health and disease when the genetics of obesity was just starting to attract serious attention. The San Antonio Family Heart Study had also just begun, and we were collecting a fair amount of obesity-related data as part of the study. When I was asked if I would like to work with that data set, I said yes, not realizing that it would become the central focus of my career. In retrospect, it was a great opportunity and a decision I am certainly glad I made.

#### TN: What advances in genetic research have you seen in the past several years?

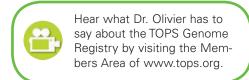
**Dr. Olivier:** Over the last decade, we have identified numerous genes that contribute to obesity, but ultimately, we are still unclear about what predisposes one individual to gain weight and another to stay slim. We still only know a small part, and are learning more every day about how our body works, and how our genes affect this.

#### **TN**: What other factors contribute to weight gain?

**Dr. Comuzzie:** While there is no doubt now that genes play a significant role in influencing a person's risk for obesity, just like that for diabetes or heart disease, it is also equally clear that genes are not the sole culprit. Environmental factors such as diet and exercise also play a major role. While we often repeat the statement that obesity is a complex condition, we don't always internalize that fact.

Two major changes have occurred over the last four to five decades: changes in our environment that make calories easy to come by (for example, an increased number of fast-food eateries), as well as technological advances, such as garage door openers and remote controls, that make it more and more difficult for us to burn calories in our daily lives. Many urban settings are also not conducive to walking or other types of physical activity. As a result, even those without a genetic predisposition to weight gain find it increasingly difficult to keep themselves from putting on pounds.

### **TN**: What do you hope will come of the research you conduct as part of the TOPS Genome Registry?



Dr. Olivier: We are hoping to collect information from KOPS and TOPS members alike, to participate in a study. With the information we collect, we will try and identify what has helped KOPS members to lose weight successfully, even as other TOPS members struggle. What we're hoping for is not a miracle pill, by any means, but data that can eventually help our children or grandchildren find effective ways to lose and control weight.

## **Triumphs of the TOPS Center**

A Few Highlights

To learn more and to sign up to participate in the TOPS Genome Registry, visit www.topsgenome.org.

The TOPS Genome Registry provides an exciting new opportunity for members to participate in research for the first time in 20 years!

2016

2015

The TOPS Nutrition and Obesity Research Center is established at Texas Biomedical Research Institute.

TOPS and the Medical College of Wisconsin announce the discovery of two new genes that may influence obesity.

2013

2011

DNA of the MRC-OB's original participants is studied again to see if these genes have changed over time.

The project reports its first success: the discovery that a chromosome associated with all the features of obesity is controlled by an obesity gene.

2000

1997-2002

2,200 TOPS members volunteer additional DNA for the MRC-OB gene project via blood draws at family reunions.

70,000 TOPS members turn in questionnaires to help with a new research project, The Medical Risks and Complications of Obesity (MRC-OB), at the center. Of those responding, 500 families are found to be good candidates for the study.

1994

1995-

1996

The Medical College of Wisconsin dedicates the TOPS Center for Obesity and Metabolic Research.

The January 25 issue of *TIME* reports on TOPS lab researcher Dr. Ahmed Kissebah's studies of the "apple-" and "pear-shape" body types, phrases he coined.

1982

1966

TOPS contributes \$250,000 to begin the Obesity and Metabolic Research Program.