

Scientists find genetic link to obesity

Experts say the gene could be partially responsible for as many as five percent of obesity cases

Ali Shaughnessy

Environment/Science/Technology Reporter

Researchers have found a link between obesity and the melanocortin 4 receptor, which is related to the production of protein that helps stimulate appetite in the brain's hunger-regulating area, according to a report in the New England Journal of Medicine.

"The MC4 gene is the most common genetic cause of severe obesity known," Dr. Roger Cone of the Vollum Institute at Oregon Health and Science University said. "It's responsible for up to five percent of cases of obesity."

Cone's lab originally discovered in

1997 that a circuit exists in the brain that acts to regulate food intake. The circuit is controlled by the MC4 and MC3 — melanocortin 3 receptor — genes. When a mutation occurs with these genes, a person can have problems with binge eating, obesity or weight loss.

"Basically, if you disrupt the melanocortin circuit in any way, you end up with an obesity syndrome," Cone said.

A study done by researchers in Switzerland, Germany and New York looked at 469 severely obese adults and their melanocortin gene.

The scientists also collected detailed information on body fat, resting energy expenditure and eating behavior.

"Obesity, a multifactorial disease

caused by the interaction of genetic factors with the environment, is largely polygenic," Dr. Ruth Branson of the Hirslanden Clinic said in the report.

Of the 469 adults who participated in the study, 24 people — or five percent of the total — possessed mutations in MC4 and all were found to be binge eaters. The study also found that only 14 percent of the remaining 445 participants without the mutated gene were found to be binge eaters. The average age of the participants was 41 years.

"Binge eating is a major phenotypic characteristic of subjects with a mutation in MC4, a candidate gene for the control of eating behavior," Branson and her coauthors concluded in the report.

Dangers of obesity

- High blood pressure, hypertension
- Type 2 diabetes
- Glucose intolerance
- Coronary heart disease
- Congestive heart failure
- Stroke
- Some types of cancer (such as breast, prostate and colon)
- Complications of pregnancy
- Psychological disorders

SOURCE: National Institutes of Health

Another recent research report from England came to a similar conclusion, saying "mutations in the melanocortin 4 receptor gene represented the most common (single-gene) cause of human obesity."

Obese individuals are at an increased risk for physical ailments, including high blood pressure, type 2 di-

abetes, coronary heart disease and complications of pregnancy, according to the National Institutes of Health.

Scientists are continuing the research and are working to develop drugs that will correct the imbalance and prevent obesity and binge eating.

Contact the reporter at alishaughnessy@dailyemerald.com.

Suicide

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Ojo attended Thursday's memorial service, held at Eugene's Orchard Point Park.

"He maintained exemplary social interactions with people," Ojo said of the personal testimonies given at the gathering. "From the little I know about Kyle, he had an amicable personality and excellent human rela-

tions. May his gentle soul rest in perfect peace."

Richmond was born on May 4, 1983, in Long Beach, Calif., to Gary and Cynthia Dalton Richmond. He moved to the area in 1987 and lived in Springfield before moving to Junction City. He graduated from Junction City High School in 2001, and he attended the University of Maine and the University of Oregon.

Richmond's interests included snow skiing, traveling and shopping, and he especially enjoyed spending time with friends and family.

Survivors include his mother and stepfather, Barry Schweigert, of Junction City; his father, of

Springfield; two sisters, Shelbi Whiddon of Springfield and Helena of Salem; three brothers, Allen of Hawaii, Chris of Naples, Fla., and Lynn, currently of Iraq; and his grandparents, Kathy Dalton of Eugene and Lyle and Dale Richmond

of Springfield.

Memorial contributions can be made to the Children's Miracle Network.

Contact the reporter at caronalarab@dailyemerald.com.

Campus buzz

Wednesday

"The Play of the Narrative: The Autobiography in Dance Performance" (discussion by Sherrie Barr, part of the Brown Bag Lunch Series sponsored by the Center for the Study of Women in Society), noon-1 p.m., 330 Hendricks, free, 346-5015.

"Straight Heroes with Queer Inclinations: Male Film Stars in the Swedish 1930s" (talk by Louise Wallenberg, a visiting Fulbright professor from Stockholm University), 3:30 p.m., EMU Rogue Room, free, 346-4051.

"Black and White: United and Fight? Race and Labor in Modern America" (lecture by

historian Robert Zieger, sponsored by the Labor Education and Research Center), 4 p.m., Gerlinger Alumni Lounge, free, 346-5054.

"Conversation about adult mental health services in Lane County" (forum sponsored by the Lane County Mental Health Advisory Committee and the Department of Health and Human Services), 5:30-7:30 p.m., Lane County Mental Health building, 2411 Centennial Blvd., free (pizza provided), 682-3814.

Central Javanese court gamelan (inaugural concert by the University School of Music's Indonesian orchestra, directed by Professor Joko Purwanto, explanatory narration by Mark Levy), 8 p.m., Beall Hall, \$5, \$3, 346-5678.

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- Gandhi

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May 28
WEDNESDAY
Robert Zieger
4-6pm
Gerlinger Lounge

May 29
THURSDAY
Dylan Rodriguez of UC Riverside
"Prison Industrial Complex and
Communities of Color."
2pm, lecture, Knight Library
6pm, reception and talk, MCC

May 31
SATURDAY
Socially Conscious Hip Hop with Blue
Scholar, Isangmahal, Good Sista/Bad
Sista and La Paz
4pm, EMU Amphitheater

June 3
TUESDAY
Pilipina, mixed heritage, queer media
activist and performance artist
Margarita Alcantara-Tan.
6pm, EMU Fir Room

Lemonade Stand

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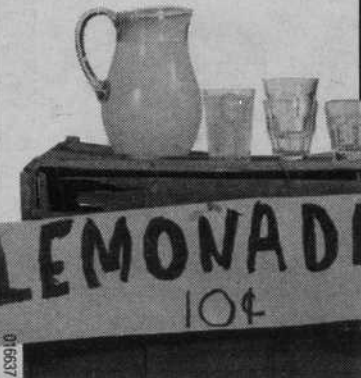


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