Maine Medical Center (MMC) has received $1.3 million from the National Institutes of Health (NIH) to study how changes in the expression of a certain gene affect obesity. The hope is that studies of this gene, known as mesoderm specific transcript (MEST), could someday lead to new strategies for the treatment of obesity and type 2 diabetes.

Maine Medical Center Research Institute (MMCRI) Faculty Scientist Robert Koza, PhD, has been studying the epigenetic regulation of MEST. Epigenetic processes can determine whether genes are expressed, or “turned on.” Dr. Koza’s previous studies indicate that animals are less likely to become obese on a high-fat diet when MEST is not expressed or expressed at low levels. What scientists have yet to determine is the function of MEST in the body and the precise epigenetic processes that regulate its expression. This study aims to answer those questions.

“Identifying the molecular pathways by which MEST facilitates the expansion of fat mass and regulates blood glucose could be the first step toward a new way to help treat obesity,” Dr. Koza said. “Years from now, these studies may also define new early interventions doctors could take to help patients prevent the development of obesity and type 2 diabetes.”

Metabolic diseases like obesity and diabetes are a focus of researchers at MMCRI because of their prevalence in Maine. In 2016, the Centers for Disease Control and Prevention listed Maine as having a diabetes rate of 8.5 percent and obesity rate of 30 percent, the highest in New England.

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Robert Koza, PhD, looks at data inside his lab at the Maine Medical Center Research Institute.
‘Anniversaries’
From Front

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Elizabeth Pavao, Surgery
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Erin Beaver, Family Birth Center
Shaun Campbell, Pharmacy
Debra Cushman, Linen Processing
Jason Dunton, Scarborough Surgery Center
Jami Gardner, Neurology
Alison Gilbert, Anesthesiology
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Paul Han, MMRI
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Carolyn Palmer, R7
LuAnn Peraakis, P6
Gary Perry, Sterile Processing
Ruth Prue, Neurology
Dianne Shaw, Patient Access
Emily Siegel, Pediatric Specialty Care

Tara Wardrop, Cardiology

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Lin-Lee Allen, Poison Control
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