University of Lethbridge

NEWS RELEASE

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Researchers point to the need to further study the negative health effects associated with discrimination

Research team points to possible epigenetic link between discrimination and disease and call for further research

The University of Lethbridge's Dr. Olga Kovalchuk and her daughter, Dr. Anna Fiselier (BSc '14, MSc '15, PhD '17), a Family Medicine resident at the Cumming School of Medicine at the University of Calgary, are part of a research team calling for more action to end discrimination, along with further studies to identify the health effects of discrimination as they relate to disease and aging.

Discrimination can affect an individual's health in many ways. In addition to limiting access to health care and lowering quality of life, recent research shows discrimination is a chronic stressor that has a physiological impact on the body that could later manifest as disease — something that costs society as a whole.

Kovalchuk, an MD/PhD and biology professor, teamed up with researchers from the Cumming School of Medicine, Yale University, the Newly Institute and Advanced Cardiology Consultants and Diagnostics, Inc. Their paper, titled *From discrimination and dis-ease to aging and disease — An epigenetic connection*, was recently published in the prestigious journal *Lancet Regional Health — Americas*.

"Despite the expansion of global equity, diversity and inclusion (EDI) efforts, discrimination is still a challenge for large groups in our society," says Fiselier. "Those who experience discrimination daily include women, immigrants, the elderly, minorities, lower-income persons, people with disabilities, as well as people experiencing addiction and mental health challenges."

“Persistent, chronic stress causes negative outcomes,” says Kovalchuk. “In addition to accelerating our efforts to end discrimination, we need to identify the health effects of discrimination and develop proper health measures to combat these issues.”

In the body, ongoing stress affects an individual’s metabolism and inflammation reactions. When the stress-response systems are continually activated, they cause significant wear and tear. One study has shown that discrimination may lead to accelerated aging while other research has shown that age-related diseases, such as cardiovascular disease, hypertension, asthma and autoimmune conditions, are associated with discrimination. These diseases have an epigenetic basis, meaning that gene expression has been altered.

“Epigenetic changes are pliable and reversible,” says Fiselier. “That’s why timely intervention and the prevention of discrimination may help limit the potential of severe health consequences for those who experience discrimination.”

The researchers also considered the impact of COVID-19 on those who experience discrimination. The pandemic highlighted issues of systemic discrimination in access to care and they suspect people who experience discrimination may also be at a higher risk of long COVID.

This news release can be found online at health effects of discrimination.

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Contact
Caroline Zentner, public affairs adviser
University of Lethbridge
403-394-3975 or 403-795-5403 (cell)
caroline.zentner@uleth.ca