CANCER CAUSE TO PIONEER NEW TREATMENTS IMAGINE A WORLD WITHOUT CANCER





Ithough some \$2 trillion has been spent on research since 1971, cancer remains a leading cause of death in the United States.

Ijaz S. Jamall and Bjorn Brücher have extensively researched the causes of cancer and believe there might be a more effective way to treat the disease, prevent its spread, and reduce the number of deaths. Jamall and Brucher are co-founders of the Cancer Metastases Research Fund (CMRF), a Sacramento-based nonprofit that will support studies on the development of cancer, its treatment, and its spread.

Both men are members of the European Academy of Sciences. Jamall, a toxicologist, is a former professor at St. John's University, who was also an associate clinical professor in the volunteer clinical faculty of the UC Davis School of Medicine. Brücher, a cancer scientist and surgeon, is a professor at the Medical University Lausitz-Carl Thiem in Cottbus, Germany.

Jamall and Brücher maintain that current cancer treatments—



By Rebecca Kuzins Sponsored Content



chemotherapy, radiation, and immunology—do not provide long-term survival benefits for patients. The cancer mortality rates for most solid cancers remain relatively unchanged over the past 80 years with some gains from the decline of smoking for lung cancer, and early screenings for breast and prostate cancers.

During a recent interview at his home, Jamall discussed the CMRF's research. The diagnosis of cancer, he explained, is based on pathology characterizing the abnormal appearance of a tumor cell under a microscope.

"Pathology makes the diagnosis from a tissue biopsy specimen. However, there is a misconception that this can explain what causes the disease or even how cancer progresses from its early stage to the more advanced state," he said.

The progression of cancer is subclinical - meaning patients usually do not have any symptoms at various stages of development of the disease. By the time symptoms appear and cancer is diagnosed, the disease is in an advanced stage and more difficult to treat. The majority of cancer cases – 80 percent – are diagnosed in an advanced stage.

Jamall and Brücher argue that physicians should adopt a cause-based approach to cancer treatment instead of the current symptoms-based approach. A cause-based approach could enable physicians to diagnose cancer before it manifests itself as a disease, which could buy time to treat the disease in its earliest forms with far better outcomes for cancer patients.

"There are two primary questions that form the basis for understanding the development of cancer and these have not been elucidated for the majority of cancers. ... The first question is how the majority of cancers arise. The second question is which is the first cancer cell type," Jamall explained.

Through their research, Jamall and Brücher discovered the plausible origin of cancer and which is the first cancer cell.

They have concluded that the majority of solid cancers (epithelial cancers make over 80% of all cancers) develop in response to a six-step sequence. Jamall said the disease can likely be blocked or treated at any stage in this sequence.

In step one, a pathogen (diseasecausing stimulus), such as a bacterium, virus, or carcinogen, leads to inflammation, in response to which the affected tissues take defensive measures to heal.

A stimulus that is untreated and unabated can result in chronic subclinical inflammation, which is step two. In some cases, this inflammation can be healed; but if it is not healed, it can lead to fibrosis.

Step three is fibrosis — an excess of scar tissue inside the body, but this fibrosis is different from usual fibrosis, because its molecular signaling is altered. "Think of it as a nest of fibrotic tissue, which is a precursor to cancer development," said Jamall. The generation of this precancerous niche is step four.

In step five, the body mounts a 'chronic stress escape strategy'. This response can return the body's cellular functions to normal. But, if the response fails, a normal cell becomes a cancer cell - step six.

Jamall and Brucher have published 17 papers about their discoveries during the last 10 years and the CMRF now plans to conduct clinical trials on medications that might more effectively treat cancer and its spread (metastases).

CMRF is seeking to raise a minimum of \$2 million to fund these trials.

If you would like to contribute to CMRF, you can make a donation on its website https:// cancermetastasesresearchfund. org; click on the word "donate" on the home page. You can also send donations to the CMRF at 3929 Las Pasas Way, Sacramento 95864.

In addition, you can contact Jamall at the website or address if you would like him to describe CMRF's work to an interested group.