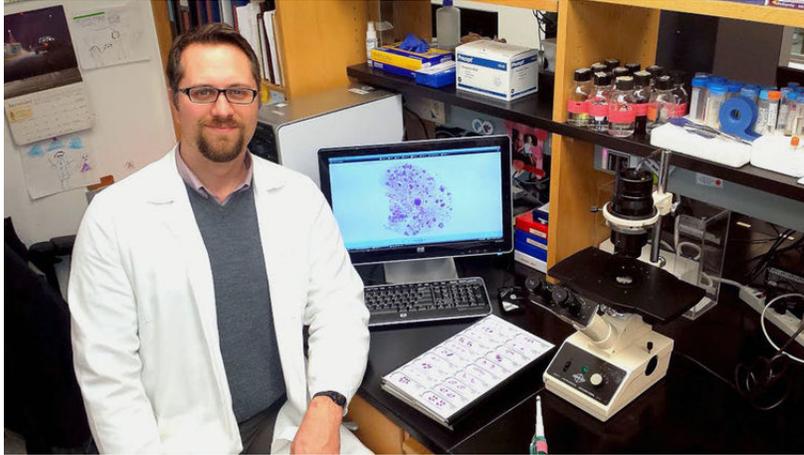


Former Lewis County Resident Discovers Cancer-Causing Gene

By Justyna Tomtas / jtomtas@chronline.com | Posted: Tuesday, January 19, 2016 9:58 am



Mick Edmonds has been touched by cancer. While he was attending Washington State University to get a degree in molecular biology, Edmonds' grandfather was diagnosed with the disease.

At that point, doctors told the family there was nothing they could do for his grandfather in Chehalis.

"That just really surprised me," the Napavine High School and Centralia College graduate said. "It's 2000, whatever it was, and there's nothing you can do for him. It made me re-evaluate everything ... I felt that if medicine can't do anything for him, I need to go into science."

That caused Edmonds to shift his career focus to become a cancer biologist, leading him to make a significant find in the field when he pinpointed a new cancer-causing gene in lung cancer patients.

His findings showed that elevated levels of the gene in lung cancer patients correlated to poor survival, and the gene was found to provide a novel potential therapeutic target for lung cancers that currently have no great treatment plans, Edmonds said.

From WSU, to Birmingham Alabama, where he received his doctorate degree in cancer biology, Edmonds then went to Vanderbilt in Nashville, Tennessee, to work under a world expert in a lab. He's currently in his second postdoctoral fellowship at Vanderbilt.

Edmonds and his team used different models to analyze patient samples and see if genes were causing cancer.

By looking at a lung cancer patient sample, Edmonds was able to find a gene that can by itself cause cancer.

"That was a really huge find," he said. "This was the first time it was shown it could cause cancer."

Not only can the specific gene cause cancer by itself, Edmonds said, it can also accelerate the rate of cancer growth of other genes.

The new discovery showed the gene had tissue-specific functions. Although it can cause and accelerate the rate of lung cancer, the gene is known to stop other cancers from growing, Edmonds said, such as breast and prostate cancers.

"This means we need to have personalized medicine," Edmonds said, adding that this was the first time it was shown in this particular gene.

The discovery is one that took countless hours of work by Edmonds and his other team members. Edmonds said it took over five years of work, working seven days a week with no holidays off.

Although his work has been printed in a high-tier peer-reviewed journal, the work is far from over for the Lewis County native.

Now, Edmonds said he has to propose studies on inhibiting the gene.

From there, the next step is to find a company or university that will make a drug to do just that.

"We find what causes it, if it causes it, take it away and then we can stop it

and then target it," he said. "The ultimate goal is to cure (cancer) but we have to be as careful as possible and do it as fast as possible."

He said the discovery was a major one.

"This is huge for anybody who might get lung cancer, which is the No. 1 cancer killer in the U.S.," he said.

For a man who grew up in a small, rural county, he said the values that were instilled by his family helped shape his strong work ethic. His parents, Tim and LaRae Edmonds, have been a large support system, as has his wife, Britta Edmonds. Coming from a family of loggers and mill workers in Lewis County, he said he could have not done it without the important lessons they taught him growing up.

"Not too many people grew up in Lewis County and say they want to be a molecular biologist," he said.

Although he changed his career path to focus more specifically on cancer, he said it was a personal lifelong journey that has been more than fulfilling.

He said discovery of the cancer causing gene was a huge discovery, something that was exciting for his family, along with his three children.

His long hours at work have helped shed light on lung cancer research, a pathway that only accounts for 5 percent of the research into cancer. Edmonds, sacrifices have been great. He said he hasn't been home for Christmas in over a decade because he simply can't leave his work, something that can impact hundreds of thousands of people

"Something like this is huge. It's validating the sacrifices we made and it is also very gratifying in the sense that I know it will help a lot of people," he said of the discovery. "What we do is very challenging. People don't want to do it.... (This find), it feels good."