

The scientist investigating the healing properties of food



Janet Gutiérrez recalls visiting her **grandmother** in Jalisco, who taught her how to make **cheese** and **jams** with **seasonal fruits**. She regretted not being able to convince her to **industrialize her products**.

*“From there on, I had the **idea** that there are **foods** in **Mexico** that **aren’t used sufficiently** by society. That’s also why I decided to study **food engineering**,”* says Dr. Gutiérrez.

Moving to Nuevo León and studying **Food Engineering** at [Tec de Monterrey](#) would lead Janet to **investigating food compounds** that can be **used for health purposes**, amid the challenges of being a researcher in Mexico.

Nevertheless, this Tec researcher has been recognized with the **Rómulo Garza Award for Research** in 2022, adding to an award she received from the [Mexican Academy of Sciences](#) in **2020**.

*“This redoubles my **commitment** as a **researcher** at the **Tec** to having a significant impact on not only the number of patents, training, and graduate programs, but also on **students**,”* says Gutiérrez.



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The second woman to win the Insignia Award

Dr. Gutiérrez was awarded the **2021 Rómulo Garza Award**, the **highest recognition** given by **Tec de Monterrey** in partnership with **Xignux**, which recognizes **research** and **innovation** carried out by faculty and students at the Tec.

This makes her the **second woman** to win the **Insignia prize**, the **most important** category of the award, which was announced during the **Tec's 52nd Research and Development Conference**.

*"Today, I receive this **award with great responsibility**, as I hope to **continue multiplying this passion** for research and inviting **many more young people** on this **journey**,"* says Gutiérrez.

The **researcher** has stood out in the **food industry** since graduating from that engineering program in 1999 and subsequently earning a **Master of Science** in Biotechnology and a **PhD** in Science, also from the Tec.

Her research includes validating **active compounds** in **Mexican vegetables**, such as **corn**, **black beans**, **chili**, and **agave**, as well as certain **fruits**, to endorse **Mexican gastronomy**, not for its flavor, but for its **health benefits**.

*"Above all, receiving this type of **recognition** makes my **students** give their very **best**."*

Dr. Janet notes that she didn't feel she had **sufficient credentials** to **apply for the award** for some time, but she did so after winning the **Academy of Sciences Award** in 2020 and becoming a **Level 3 Researcher** in the **CONACYT National Research System**.

*“That gave me **more confidence**. I didn’t expect it to happen so soon and it’s such a surprise, but it’s the right time,” she says.*

Her research has led to around **3,200 citations** of her **scientific articles**, as well as having **33 graduate students** and **19 patents** with over **120 published articles**.

*“I see myself **reflected** in my **students** now that we’ve started classes, and I see that **spark of wanting to change things** and a hunger to do more and know more.*

*“That’s what the **Rómulo Garza Award** means to me, and it’s one of the reasons I took part: to tell them (young people) that **they don’t have to wait 30 or 40 years to achieve great things** if they’re disciplined, persistent, and have a clear goal.”*



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Her food research

In the year 2000, Dr. Gutiérrez was reviewing scientific literature when she came across studies showing low rates of **breast cancer** in Japan, which was apparently related to **soy** intake, and she thought that something similar might be found in Mexico.

*“I said to Dr. Sergio Serna (leader of the Nutriomics research group) that we might also have a **highly consumed product** that helps prevent cancer in Mexico.*

“When we began to look at it, we noticed a lower incidence of breast cancer in the states of Mexico where there was a higher consumption of black beans. And that’s how we selected our raw material to begin the investigation.”

The findings of the research, which later included not only beans, but various other foods such as **corn, chickpeas, nopal, and agave**, have been very important and promising for the fight against cancer.

In animal laboratory tests, specialists have already achieved **around a 40% reduction in cancerous tumors**.

In 2017, the **Mexican Association of Gastroenterology** awarded her **first place** in the **“Bernardo Sepúlveda” Award**, for her research on combating **colon cancer** with black beans.

“I had the idea that there are foods in Mexico that aren’t used sufficiently by society.”

From entrepreneur to the *Institute for Obesity Research*.

When her time came to **study** for a **degree**, Janet knew she wanted to be an **engineer**, but she was also interested in **entrepreneurship**, so she didn’t know if she could find a way to combine them.

*“When I lived in Jalisco, my grandmother wanted to teach me how to make **cheese and jams**. She **didn’t want to industrialize them**, but I did.”*

Since that **idea** she got from her **grandmother** about the **low utilization of nutrients in foods** in Mexico, Janet **started** investigating ways to get the most out of them in **technology-based startups**.

The researcher would start on a **path** that would also include other **Mexican vegetables**, such as **corn, chili, and agave**, as well as **certain fruits**, together with an entrepreneur who turned a family business into an international one.

*“**Tequila** is very popular, but so are **mezcal, aguamiel, and mixiotes**. They have an **infinite number of compounds, uses, and functions** that we hadn’t discovered.”*

*“I have a **special affection** for that **project** because **I left the laboratory** to do it. Your **work** doesn’t end with **publication**, but with **solving society’s problems**. It was our first project working in the field collecting samples.”*

Currently, she runs one of the 5 **research units** at the [***Institute for Obesity Research***](#), that of **Healthy Food**.

At the same time, she says that she’s working with a few **colleagues** from **Tec de Monterrey** on a **venture** to do with **active compounds**.

*“I hope to have **inspired many young people** to start new businesses. To have been a node from which these **science-based startups** are created, and for that to drive economic development in regions of Mexico.”*

“That’s what I’d like to be remembered for,” says Gutiérrez.



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The challenges of being a researcher in Mexico

The scholar mentions one of the **greatest challenges** she's faced while dedicating her life to research.

*"Being able to find the balance between my personal and professional life, both as an **individual** and in terms of **family** and **friends**."*

*"I think that's the **part** that you have to **dedicate a few minutes** a day to. Going over your **to-do list** and thinking about how you're going to **establish priorities**. We come into this world to **be happy**, and it's important to find that balance," she says.*

Regarding being a **female researcher**, Janet says she's experienced **few adverse situations** on this **subject**, and that she herself doesn't focus on being a female researcher, but on doing her job as a **human being** hoping to **make the world a better place**.

*"I don't think being a woman has **avored** or **hindered** me, but the truth is **I never remain silent**. Ever since I was a girl, I've always told it like it is."*

*"I would invite not just **women**, but **everybody**, to do that first of all: **never stay silent**," she says.*

However, she says that the **path** of a **researcher** is difficult, especially in countries like **Mexico** where **financial support** for **research** has recently been **cut**.

*"Hopefully this won't encourage a migration of talent. This **brain drain** has always occurred but **reducing scholarships** and **research stays** are actions that further limit young people."*

*“Fortunately, young people are increasingly aware of their role in **transforming (Mexican) society**,” she says.*

Janet points out that being a **research professor** has provided her with **rewarding moments**, such as seeing her **students’ achievements** and **successes**.

“I have examples of young students who I thought couldn’t take it anymore during third or fourth semester. They had dark circles under their eyes and even frizzy hair from so much stress.

*“You give them **confidence**, and then you see them **2 or 3 years** later and they’re **succeeding** and on their way up. It’s most **satisfying**,” she concludes.*



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