

# Tec researcher recognized for testing drugs to cure cancer on chips



**Dr. Itzel Lara** has been given an award by **the 3M** company for her research “**Cancer on a Chip: Drug Evaluation in Breast Cancer Cell Spheroids using Continuous Micro-Devices**”.

The researcher was recognized via the initiative “[25 Women in Science: Latin America](#)” for the **development of platforms to streamline cancer research in the laboratory.**

The specialist explained that many **tests** are carried out that waste both money and time during **drug** creation processes, as well as noting that **approved drugs** could have an impact on patients’ lives.

*“What we’re trying to do in the lab is to make **mini breast cancer tumors**. Then, we develop ‘**cancer-on-chip**’ platforms with a chamber volume of 100 microliters.*

*“Finally, we end up with a microcosm of a human body. We then **pass drugs through it and we see what happens to a tumor** under similar conditions,” she explained.*



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The doctor explained that what she hopes to happen as a result of this project **is the ability to take biopsies from a patient and turn them into spheroids or insert them into devices so drugs can be passed through and the reactions seen.**

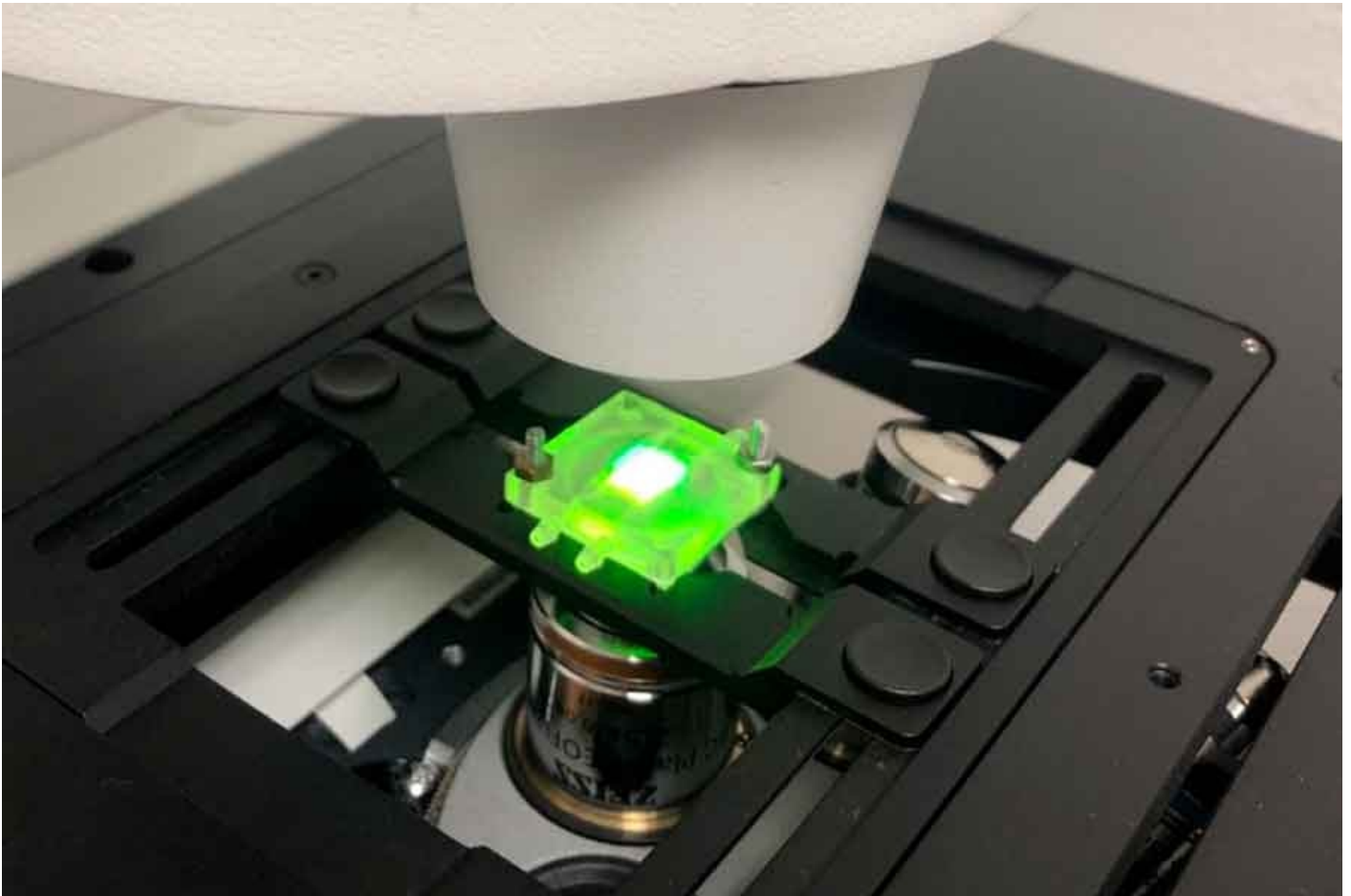
*“That means we would be able to see **what drug, or combination of drugs, are needed and what dose will make it more effective** for the treatment of the person with that particular cancer.*

*“The **treatment could be more effective and personalized.** We could also reduce the number of adverse events which occur. You’re no longer giving a person drugs that they don’t need and that are not going to have a perfect reaction,” she said.*

This work led Itzel Lara to become one of **5 Mexicans recognized by 3M in Latin America;** receiving this makes her proud and motivated to continue in science.

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Although the pandemic has limited in-person lab work, Lara recognized the great spirit that the **15 Tec students in the team** have had.

*“I think one of the best things is that we have **a very close team in which we all work together**. I miss not going to the laboratory, being with students, and seeing what they have discovered and their excited faces,”* she said.

For the researcher, recognition from the **3M company** came at the perfect moment, as it reaffirmed science as something she enjoys, although it can be difficult.

*“One of the biggest problems in science is **getting funding**; I got this just as I was beginning to have doubts about that, because of the pandemic. It’s **very important to continue fighting for our passions and for what excites us**.”*

*“This has also had an impact on **my students**: they’re all very excited, they all want to be scientists, to win prizes, and want to go back to work in the lab. This has been a great injection of motivation for the whole group,”* she explained.



The infographic features a circular portrait of Itzel Montserrat Lara Mayorga on the left. To the right, text provides her details: 'País: México', 'Nombre: Itzel Montserrat Lara Mayorga', 'Áreas de acción: Salud', and 'Nombre del proyecto: Cáncer en un chip: Evaluación de fármacos en esferoides de células de cáncer de mama utilizando micro-dispositivos continuos'. The background is purple with white line-art icons of a stethoscope, a woman's face with glasses, and a globe. At the bottom, there are two buttons: 'Visita nuestro blog en curiosidad.3M.com' and the 3M logo with the slogan 'Ciencia. Aplicada a la vida.™'.

País:  
**México**

Nombre:  
**Itzel Montserrat Lara Mayorga**

Áreas de acción:  
**Salud**

Nombre del proyecto:  
**Cáncer en un chip: Evaluación de fármacos en esferoides de células de cáncer de mama utilizando micro-dispositivos continuos**

Visita nuestro blog en [curiosidad.3M.com](http://curiosidad.3M.com)

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### 'We need science'

The pandemic has made it more evident to Itzel that the world needs to do more science. This is why she invited young people to be involved in the project, to have a bigger impact.

*"(The pandemic) has made it very clear that we, as a region, **need scientific and technological independence**. This award has opened our eyes to see that we really are doing things well. **We need science**," she said.*

*"**The more people who get involved in science, the faster we will be able to advance**. It's about getting everyone involved.*

*"We need to see science from different points of view, but especially that of girls: they make up 50% of the population, or 50% of the talent that we could take advantage of in science. **We need their abilities, because right now we need to find solutions**," she recognized.*

Itzel, who holds a degree in **Industrial Biochemical Engineering** from the **Autonomous Metropolitan University** and a master's degree in science with a specialization in **Biotechnology** from the [Tec](#), thanked her students and leaders after winning the prize.

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*“I thank my students because, without them, I would definitely not be where I am; **they have been the best teachers**: the ones that have forced me to prepare and work even harder. Their work is important for me because it provides the stimulus for all of us.”*

*“And of course, I thank **my supervisors, Dr. Sergio Mar, Dr. Grissel Trujillo, and Dr. Mario Álvarez**. They are people that I admire and really like to work with. My supervisors have been fundamental. Also, the **Baur Chair**, which is financing my work here,” she said.*

The doctor also extended her gratitude to **Dr. Emilia García**, who was her boss at the [Merz](#) pharmaceutical company and who recommended her for the “25 Women in Science: Latin America” award.

*“The support of a woman was very important for me in winning this prize. I have a lot to thank her for: for pushing me and believing in me. We all need someone who believes in us and who sees things in us that we don’t see,” she explained.*

Alongside researcher Itzel Lara, [Dr. Judith Zavala](#), a professor at the School of Medicine and Sciences on Monterrey campus, was also one of the 3M award-winning scientists.

**Watch the video of the winners:**

<https://www.facebook.com/watch/?v=465145138185932>

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