TUNISIAN SUCCESS
NORTH AMERICA

PROFILES · SCIENCE · MONTREAL

Neila Mezghani, the Tunisian scientist who taught artificial intelligence to heal our knees

She came to Montreal for a few months. Twenty years later, her algorithms are used in clinics in several countries, she leads two research chairs, and she has turned science into a bridge between Quebec and Tunisia.

BY THE **EDITORS** · NOVEMBER 28, 2026 · 6 MIN READ



Neila Mezghani, full professor at Université TÉLUQ and Canada Research Chair in Biomedical Data Analysis.

Neila Mezghani tells the story with a smile: “I was only coming for a few months.” That is how she summed up her arrival in Montreal in 2017, speaking to the magazine Affaires universitaires. An internship, a plane ticket and the plan to head back to Tunis once the work was done. The few months became a career. Today a full professor at Université TÉLUQ, Quebec's distance-learning university, holder of a Canada Research Chair and now of a second chair focused on Tunisia, she belongs to that group of researchers whose work leaves the lab to change patients' lives in very concrete ways.

Her field of choice is biomedical data analysis. Put simply, she teaches machines to read what the human body expresses in numbers, so that doctors can make better diagnoses and choose the right treatment. And one part of the body takes up much of her research: the knee.

From Tunis to Montreal, the making of an engineer

Born in Tunis, Neila Mezghani is a product of Tunisia's engineering schools through and through. She earned her telecommunications engineering degree from Sup'Com, the École supérieure des communications de Tunis, where she also completed a specialized graduate diploma in information technology. She went on to earn an advanced graduate diploma in control engineering and signal processing at the École nationale d'ingénieurs de Tunis, the country's national engineering school.

In Montreal, she pursued a PhD in telecommunications at the INRS, Quebec's graduate research university, on computer recognition of handwritten Arabic. Before she had even defended her thesis, she was recruited by the Imaging and Orthopaedics Research Laboratory at the École de technologie supérieure (ÉTS). That is where her career turned toward health.

> **“Research is the oxygen of my life.”**
>
> NEILA MEZGHANI, AFFAIRES UNIVERSITAIRES, 2017 (TRANSLATED FROM FRENCH)

The knee, a piece of machinery AI can read

Knee osteoarthritis causes pain for millions of people and remains hard to treat with precision. In Quebec, a technology was born to understand it better: the KneeKG, a device that measures in three dimensions how the knee moves during walking. Launched in 2011 after some fifteen years of research, it is now used in more than a hundred clinics and hospitals in eight countries.

Neila Mezghani's contribution lies in the intelligence that turns those measurements into decisions. Her analysis methods make it possible to recognize, in movement data, the signatures of different knee conditions. She is a co-inventor on a U.S. patent granted in 2017 for a method of assessing the knee joint, assigned to Emovi, the Quebec company that markets the KneeKG. In a study of 515 patients, 88 percent followed the exercise programs drawn up from the exam for at least three months, and reported less pain.

HER JOURNEY AT A GLANCE

Tunis	Telecommunications engineering degree from Sup'Com; advanced graduate diploma (DEA) in control engineering and signal processing at ENIT.
Montreal	PhD in telecommunications at the INRS; recruited by the Imaging and Orthopaedics Laboratory at ÉTS.
2017	Canada Research Chair in Biomedical Data Analysis; TÉLUQ researcher of the year.
2021	Canada Research Chair renewed for five years.
2024	Impact Award from the École de technologie supérieure.
2026	Takes the helm of the Dr. Sadok Besrour Chair, funded by a $1.3-million gift.

A Canada Research Chair

In 2017, Neila Mezghani was awarded a Canada Research Chair in Biomedical Data Analysis, presented at the time as the first chair devoted to the field in the country. The Canada Research Chairs program recognizes researchers the country wants to keep and support among the best in their disciplines. Hers was renewed in 2021 for five years.

A team took shape around her, and industry projects followed one after another: $360,000 from the Natural Sciences and Engineering Research Council in 2020, in partnership with Emovi and Kinduct, then nearly $472,000 from Axelys and Quebec's Ministry of the Economy in 2022, for AI-assisted assessment of knee conditions. She has authored or co-authored some two hundred scientific papers and, year after year, trains doctoral candidates, master's students and interns.

Honours followed: TÉLUQ researcher of the year and a Brilliant Academic award at the Congrès maghrébin au Québec in 2017, an outstanding woman scientist award in 2019, the Innovation Award from ADRIQ, Quebec's research and innovation association, in 2022, and the Impact Award from the École de technologie supérieure in 2024.

A bridge between Quebec and Tunisia

On May 8, 2026, a new chapter began. Neila Mezghani took the helm of the Dr. Sadok Besrour Chair in health technologies for medically isolated regions, funded by a $1.3-million philanthropic gift. Its goal: to put digital innovation to work for people far from care, and to strengthen the scientific bridge between Canada and Tunisia. The chair was launched in the presence of representatives of the Tunisian embassy and consulate, as well as the Mission universitaire de Tunisie, Tunisia's academic mission.

For the researcher, technology is only worth something if it serves real people. Digital health innovation, she said at the launch, must be rooted “in human realities.” That conviction also runs through her collaborations with Sup'Com and ENIT, the schools that trained her, where she co-supervises the work of Tunisian students.

Neila Mezghani belongs to the generation of Tunisian women who are building Quebec, to borrow the title of a profile of her published by the Gazette des femmes. Yet she has never stopped building Tunisia, too.

TUNISIAN PRIDE

She left Tunis for a few months. Neila Mezghani turned artificial intelligence into a form of care and her career into a bridge. She is proof that Tunisian science heals, here and back home.

SOURCES

1. Université TÉLUQ, profile of Neila Mezghani: www.teluq.ca/siteweb/univ/nmezghan.html
2. Chaire de recherche du Canada en analyse de données biomédicales, awards: chaire-biodatamining.teluq.ca/?p=313
3. Chaire, patents: chaire-biodatamining.teluq.ca/fr/brevets/
4. Affaires universitaires, March 1, 2017: www.affairesuniversitaires.ca/actualites/actualites-article/premiere-chaire-de-recherche-en-analyse-biomedicale-au-canada/
5. Government of Quebec, May 8, 2026: www.quebec.ca/nouvelles/actualites/details/un-engagement-philanthropique-majeur-pour-linnovation-en-sante-numerique-70259
6. The Conversation, June 18, 2021: theconversation.com/une-technologie-3d-pourrait-revolutionner-le-traitement-de-larthrose-du-genou-162834
7. Quebec Chief Scientist, KneeKG: www.scientifique-en-chef.gouv.qc.ca/en/research-impact/kneekg-innovates-in-the-treatment-of-knee-osteoarthritis
8. Newswire, April 8, 2020: newswire.ca/fr/news-releases/subvention-pour-l-aide-a-la-decision-therapeutique-pour-les-pathologies-du-genou-874485457.html
9. Newswire, May 25, 2022: newswire.ca/fr/news-releases/evaluation-des-pathologies-du-genou-assistees-par-l-intelligence-artificielle-financement-pour-un-projet-majeur-829814714.html
10. Gazette des femmes, 2022: gazettedesfemmes.ca/21892/ces-femmes-maghrebines-qui-construisent-le-quebec-portraits/
11. Leaders, January 27, 2017: www.leaders.com.tn/article/21520-tunisiens-au-canada-neila-mezghani-presente-les-recherches-qu-elle-mene-sur-l-intelligence-artificielle-et-les-megadonnees-au-service-de-la-medecine

Facts checked by the Tunisian Success editors in November 2026. Spotted an error? Write to us at contact@tunisiansuccess.com.