



# Alan Ávila-Ramírez

Graduate Researcher at Laboratory for Nanomedicine - KAUST

"You never change things by fighting against the existing reality. To change something, build a new model that makes the old model obsolete" - Buckminster Fuller

✉ alan.avilaramirez@kaust.edu.sa

☎ + (52) (1) 871 391 7295

📍 Thuwal, Saudi Arabia

🌐 [linkedin.com/in/alanavilarmz](https://www.linkedin.com/in/alanavilarmz)

## EXPERIENCE

### Graduate Researcher

Laboratory for Nanomedicine - KAUST [↗](#)

02/2020 - Present

KAEC, Saudi Arabia

- Materials design for Coral Restoration in the Red Sea.
- State-of-the-art techniques for bioprinting of smart materials.
- Development and characterization (Tribology) of lubricant formulations with BioChar for harsh environments.
- Coordination of BioE - Seminar (BESE).

### Research Scholar

BWH - Harvard Medical School [↗](#)

02/2019 - 01/2020

Cambridge, MA; USA

- 3D bioprinting of bioinks for wound tissue recovery.
- Image processing, data analysis and graphic design for research.
- Characterization of printability and molecular interactions of biomaterials (FT-IR, SEM, Rheology).

### Team Leader

iGEM Foundation [↗](#)

01/2017 - 10/2018

Monterrey, N.L.; México

- Creation of a Biological Memory, based on technologies as CRISPR Cas1-2 and SCRIBE systems to record information from stimuli.
- In charge of molecular biology protocols in relation to E. coli BL21 modification as transformation, DNA extraction, microbiological culture, PCR, and electrophoresis.
- Leading an interdisciplinary group of 23 people. In charge of public engagement and a national conference.
- Collaboration with government and industry institutions to gather funding and providing environment services to the south of Mexico.

### Research Assistant Innovation Department

Intelligent Forms [↗](#)

01/2018 - 05/2018

Monterrey, N.L.; Mexico

- Synthesis of nanoparticles and preparation of formulations, for photo-luminescent and electro-luminescent behaviors.
- Develop economic viability proposals for new inks development.

### Food Science Internship

Institut National Polytechnique de Toulouse [↗](#)

06/2015 - 07/2015

Toulouse, HG; France

- Logistics and organization of company products.
- Sale and distribution around Toulouse area.
- Communication and translation French, Spanish and English.

## EDUCATION

### BSc. Chemistry & Nanotechnology Engineering

Tecnológico de Monterrey [↗](#)

08/2013 - 12/2018

Monterrey, NL; México

## SKILLS

Nanotechnology

Materials Science

Bioengineering

3D Bioprinting

MATLAB

HTML

Adobe Lightroom

Data Analysis

Leadership

Entrepreneurship

## PERSONAL PROJECTS

Biomod TEC-Monterrey (01/2019 - Present) [↗](#)

- Co-founder and current advisor for the Biomod TEC-Monterrey team. They annually present their projects related to Biomolecular Engineering at UCSF.

Academic Society of Science and Engineering - SACI

(04/2017 - 04/2018) [↗](#)

- President of a multidisciplinary society for integrating science and engineering students as one entity. Our objectives were organizing workshops, conferences, and activities with professional value.

Dissertation - Osseous Tissue Regeneration. (01/2018 - 12/2018)

- Thesis: Reinforcement of hydrogels with bioceramics for osseous tissue regeneration by 3D printing. Characterization with FT-IR, SEM, XRD, Mechanical Tests and degradation.

Science Seminar (06/2017 - 12/2018) [↗](#)

- Co-creator and coordinator of free tuition course for 120 students, in order to generate connections with outstanding professionals.

## ACHIEVEMENTS

4th Generation Young Leaders - Allbiotech (2020 - 2021)

*Selected as one of the 100 Young Leaders in Biotechnology from Latinamerica.*

Clean Combustion Winter School - KAUST (03/2020)

*One of the nine worldwide selected to attend to the CCWS in Saudi Arabia.*

Scholarship - Harvard Medical School (02/2019 - Present) [↗](#)

*Issued by GDX Holdings company. Financial support for this research experience.*

GCURS BioSciences - Rice University (10/2018) [↗](#)

*Presentation of undergraduate research project*

R&D in Improvement Proposals - ITESM (05/2018) [↗](#)

*First place at ConexiónTec competition.*

Construction of South-American Citizenship (12/2014) [↗](#)

*One of the 55 selected students to attend to Universidad Católica del Uruguay.*

## LANGUAGES

Spanish ● ● ● ● ●

English ● ● ● ● ○

French ● ● ● ○ ○

German ● ● ○ ○ ○

## INTERESTS

Skateboarding

Football

Photography

Reading