

# AYLA KISER, PhD

**Biomimicry and sustainability research scientist, designer, and project leader**

International activity, based in France | [www.aylakiser.com](http://www.aylakiser.com) | [www.linkedin.com/in/aylakiser](http://www.linkedin.com/in/aylakiser)

As an expert in environmental engineering and biomimicry in industry, I design and lead the development of innovative products and processes inspired by nature, with the aim of creating systems that have a positive and regenerative impact on both people and the planet. In addition, I teach biomimicry to company R&D departments and to university students.

## EXPERIENCE

### BIOMIMICRY SENIOR SCIENTIST

JOHNSON & JOHNSON SANTÉ BEAUTÉ FRANCE | VAL-DE-REUIL, FRANCE | SINCE 2019

- Developed 12 biomimetic product concepts for cosmetics and healthcare
- Collaborated with industry and academic partners to advance J&J's sustainable and bioinspired innovation
- Built a cross-functional knowledge base of biomimetic concepts and technologies for global R&D teams
- Developed a roadmap for a regenerative and bioinspired end-to-end company ecosystem
- Delivered numerous internal and external seminars to increase awareness of biomimicry and my projects
- Created clear, effective consumer communication on scientific concepts and product benefits, in the form of new claims and attractive demonstration videos for "seeing is believing" impact
- Collaborated with J&J teams in R&D, communication, marketing, and regulatory affairs across 4 continents
- Actively participated in the cosmetics work group of the Centre Européen d'Excellence en Biomimétisme de Senlis (CEEBIOS), the largest and most recognized biomimicry organization in France
- Served as a liaison and mentor for the School of Sustainability at Arizona State University

### BIOMIMICRY POST-DOCTORAL SCIENTIST

JOHNSON & JOHNSON SANTÉ BEAUTE FRANCE | VAL-DE-REUIL, FRANCE | 2017 - 2018

- Created the first biomimicry program in the company for differentiated and sustainable innovation
- Managed 8 biomimicry projects in skin health, baby care, over-the-counter medications, dental care, and packaging
- Taught the fundamentals, methodology, and tools of biomimicry to colleagues in the company

### ENVIRONMENTAL ENGINEERING POST-DOCTORAL SCIENTIST

CATALAN INSTITUTE FOR WATER RESEARCH | GIRONA, SPAIN | 2014 - 2017

- Identified strategies to reduce the carbon footprint and chemical consumption of the end-to-end processes of two municipal wastewater treatment plants in Europe (Girone, Espagne, et Harelbeke, Belgique)
- Worked in partnership with a consortium of companies and research institutes as part of an EU project
- Served as a liaison and mentor for the School of Sustainability at Arizona State University

### NANOCHEMISTRY POST-DOCTORAL SCIENTIST

UNIVERSITY OF OREGON | EUGENE, OREGON, USA | 2012 - 2013

- Investigated the environmental fate of nanoparticles used in cosmetics and other consumer products through laboratory experiments with functionalized nanoparticles that I synthesized and characterized

### INSTRUCTOR FOR « INTRODUCTION TO ENVIRONMENTAL ENGINEERING »

ARIZONA STATE UNIVERSITY | TEMPE, ARIZONA, USA | 2011

- Taught the fundamentals of environmental engineering and problem solving in a clear and engaging manner in lectures and lab sessions; 67% of students evaluated the course as « excellent » and 33% as « very good »

## EDUCATION

### BIOMIMICRY Master of Science (MSc)

ARIZONA STATE UNIVERSITY | TEMPE, ARIZONA, USA | 2019

### ENVIRONMENTAL ENGINEERING Doctor of Philosophy (PhD)

ARIZONA STATE UNIVERSITY | TEMPE, ARIZONA, USA | 2011

### ENVIRONMENTAL ENGINEERING MSc

UNIVERSITY OF NEVADA | LAS VEGAS, NEVADA, USA | 2006

### MECHANICAL ENGINEERING Bachelor of Science (BSc)

UNIVERSITY OF NEVADA | LAS VEGAS, NEVADA, USA | 2003

## TRAINING

### BUSINESS SUSTAINABILITY MANAGEMENT

UNIVERSITY OF CAMBRIDGE INSTITUTE FOR SUSTAINABILITY LEADERSHIP | UK | 2021

Integration of sustainability across the value chain; effective communication of sustainability goals and strategies to internal and external stakeholders

### BIOMIMICRY PROFESSIONAL CERTIFICATION

BIOMIMICRY 3.8 | USA | 2019

Development of professional leadership and applied biomimicry skills for sustainable organizations

### FLAWLESS PROJECT EXECUTION

JOHNSON & JOHNSON SANTÉ BEAUTÉ FRANCE | FRANCE | 2020

Methodologies, tools, and best practices for leading interdisciplinary teams to achieve desired business results

### AYURVEDIC PRACTITIONER

L'INSTITUT FRANÇAIS DE YOGA ET D'AYURVÉDA | FRANCE | 2021 – 2024

Understanding of human anatomy and physiology through both ayurvedic and western perspectives; supporting physical and mental health through diet, activity, phytotherapy, and other natural approaches

## SELECTED PRESENTATIONS & PUBLICATIONS

Kiser MA. 2020. Biomimétisme. Chapter in: Guissart E, Barragan-Montero V, éditeurs. *Matières premières cosmétiques: Actifs naturels*. Vol. 1. France: Cosmetic Valley Editions.

Invited lecturer at Sorbonne Université (every year since 2019) and at the University of Imam Abdulrahman Bin Faisal, Kingdom of Saudi Arabia (2020) to introduce students to and generate interest in biomimicry

Kiser MA, Brun C, Oddos T. 2019 Oct 16. Biomimicry as a tool for sustainable innovation. Oral presentation: Cosmetic360 Activist Beauty Conference; Paris, France.

Kiser MA. 2018. Solving healthcare challenges by learning from nature. Oral presentation: J&J Excellence in Science Symposium; New Brunswick, New Jersey, USA.

Kiser MA. 2017 Sep 28. Healthcare of the future: Using biomimicry to shift paradigms and advance innovation. Oral presentation: l'École Polytechnique Fédérale de Lausanne (EPFL) Bioinspired Solutions for Health seminar; Lausanne, Switzerland.

Kiser MA. 2017. Expanding the solution space of research challenges with biomimicry. Oral presentation : Johnson & Johnson Spotlight on Science and Innovation Symposium; Skillman, New Jersey, USA.  
\*J&J Encore Platinum Award for Best Oral Presentation

McNulty T, Bhate D, Zhang A, Kiser MA, et al. 2017. A framework for the design of biomimetic cellular materials for additive manufacturing. *Solid Free. Fabr. Symp.*, 2188-2200.

## LANGUAGES

English: fluent; native language

French: intermediate – advanced (B2 – C1)

Turkish: intermediate (B1)

Spanish, Catalan: beginner (A1)