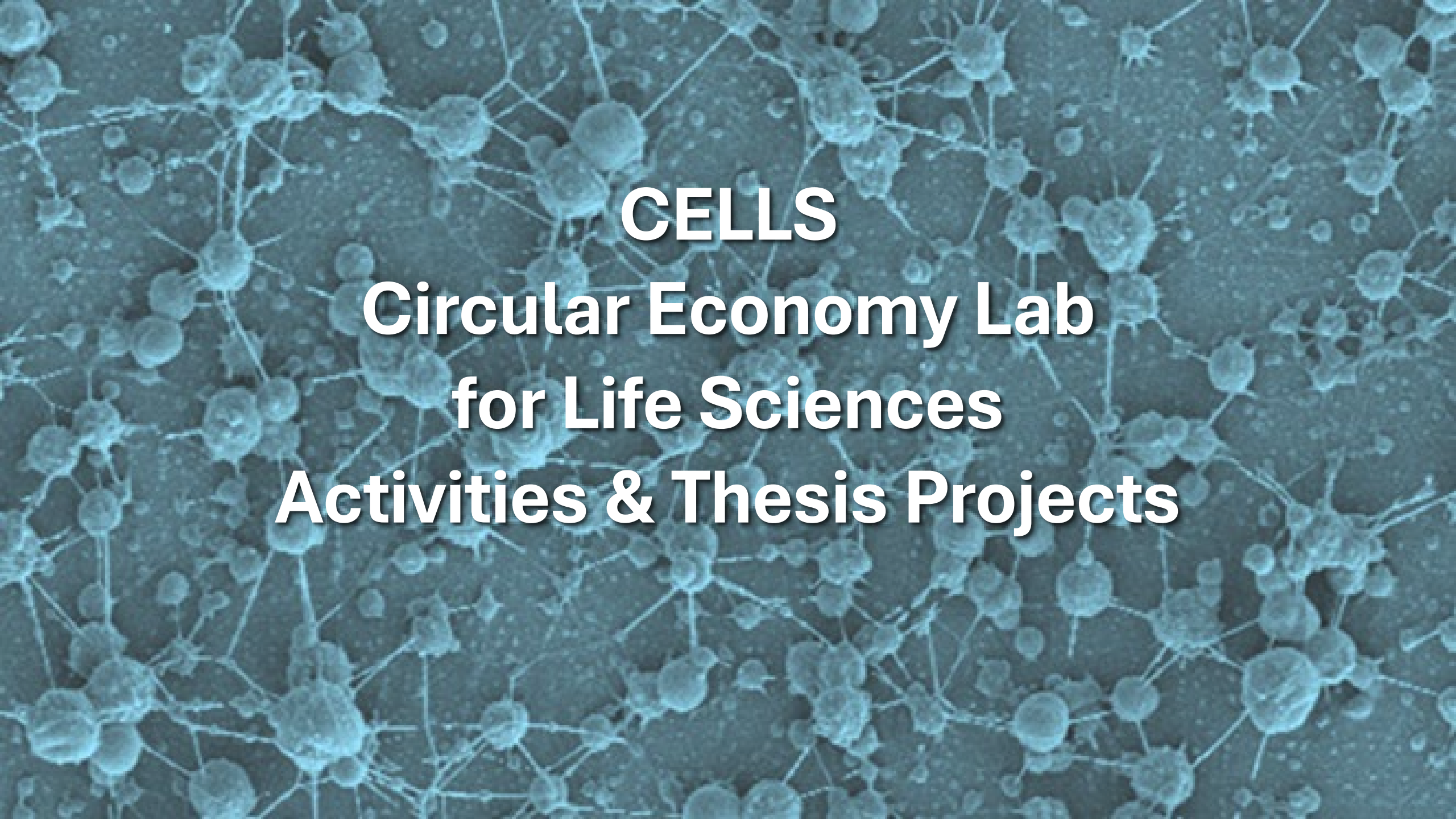


A microscopic image of cells, likely neurons, with a blue tint. The cells are interconnected by a network of fine, thread-like structures (dendrites and axons) and larger, rounded cell bodies (soma). The background is dark, and the cells are highlighted in a light blue color.

CELLS

Circular Economy Lab for Life Sciences

Activities & Thesis Projects

Activities

- Extraction
- Functionalization and analysis
- Shaping

Of bio-based materials produced in different industrial side-streams

WHY?

In 2020, the amount of anthropogenic mass exceeded the weight of **all global living biomass**.

As humans continue to dominate Earth, questions surrounding our material output are increasing. We break down the composition of all human-made materials and the rate of their production.

1120 Gt

Global Biomass

The dry weight of all life on Earth is comprised of plants, animals, bacteria, fungi, protists, archaea, and viruses, too.

¹This study converted carbon weight of all life on Earth to dry weight by a factor of 2.25

All humans make up **~0.01%** of global living biomass.

1154 Gt

Anthropogenic Mass

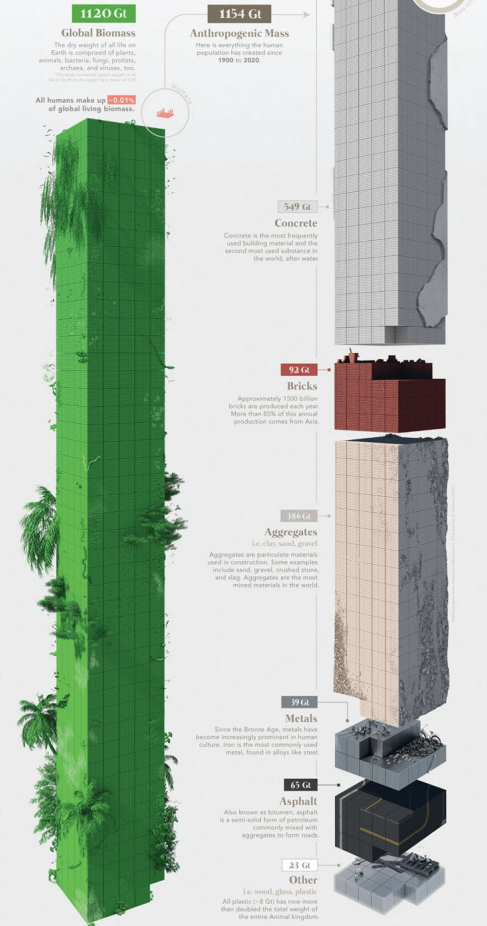
Here is everything the human population has created since **1900 to 2020**.

Humans

Visualizing the Scale of Anthropogenic Mass

Anthropogenic mass, or human-made mass, refers to the materials embedded within inanimate solid objects that are made by humans.

In 2020, the amount of anthropogenic mass exceeded the weight of **all global living biomass**.
As humans continue to dominate Earth, questions surrounding our material output are increasing. We break down the composition of all human-made materials and the rate of their production.



CELLS the equipments



Spry dryer



SEM



Granulometer



Electrospinning machine

Team



Simone Vesentini



Rony Aad



Ivana Dragojlov

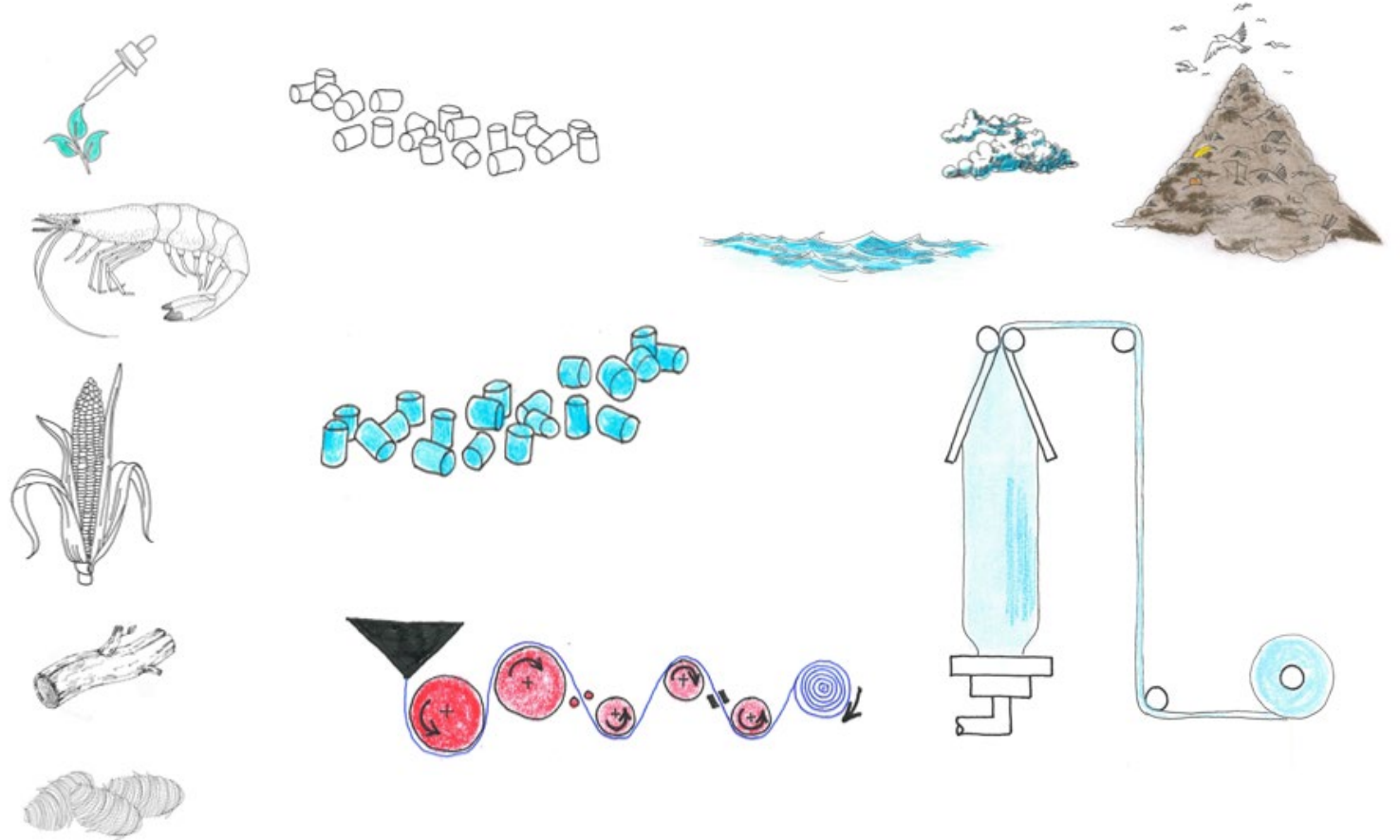
THEMES



Reuse of industry by-products

Activities

- Green degumming procedures
- Silk candy
- Sericin-Chitosan blends
- Sericin-Zein blends
- Sericin- Lignin blends



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