

## ***Legionella* ecology in building plumbing systems**

A large part of the research conducted on *Legionella* over the years has been based on *Legionella*-centric mechanisms (i.e. what is the lifestyle of *Legionella*; how *Legionella* responds to chemical treatments and temperature, etc.) and the main experiments that led to the current existing knowledge about this opportunistic pathogen were performed using pure cultures approaches. However, evidences show that *Legionella* lifestyle involves many other bacterial and eukaryotic actors: some of them can promote the growth of *Legionella*, some of them can inhibit it and some of them can serve as hosts for *Legionella* during its intracellular growth phase.

In the framework of the multidisciplinary-4 years "LeCo-project" <https://www.eawag.ch/en/department/umik/projects/leco/> (*Legionella Control in Buildings*), funded by the Swiss Confederation, this research will study how *Legionella* interact with other organisms in plumbing systems, in order to gain a better understanding of the general ecology. This will represent the basis for the development of potential new anti-*Legionella* strategies (i.e. probiotic approaches) to control the growth of the opportunistic pathogen.

