

Contract No: **COST-CA15216**

Title: **European Network of Bioadhesion Expertise: Fundamental Knowledge to Inspire Advanced Bonding Technologies**

Duration: **21/10/2016-20/04/2021**

**Abstract:**

The COST Action European Network of Bioadhesion Expertise “ENBA” was a cooperation of academic and industrial researchers from Europe and beyond, interested to characterize and address the phenomena of Bioadhesion at all scales. Many organisms, ranging from bacteria and fungi to those much larger animals and plants use chemical and mechanical means to attach permanently or temporarily to surfaces. Some bioadhesives have advantages over synthetic counterparts in terms of their ability to function over a wide temperature range, in wet or dry environments, and to form stable bonds within seconds to all substrates, even those with challenging surface coatings. Knowledge about these materials, in terms of composition, structural design and interactions with surfaces, is necessary to reveal the basic biochemical and mechanical principles involved in biological adhesion.

This COST network, using a bottom-up approach, integrated universities, applied research organisations and industry into a holistic program providing technical and scientific progress in understanding the fundamentals of natural bonding principles and in testing these natural systems in vitro. Knowledge gained by this COST Action will have a major impact on European academia and industrial competitiveness in the field of adhesion, nanotechnology, biomaterial and biotechnology and will raise public awareness of the diversity of bioadhesives and their potential for technical applications in the future.

The COST ENBA network has received funding from the European Union’s Horizon 2020 research and innovation programme.

A scientist of CHIMAR participated in this network to impart the knowledge gained by CHIMAR in the field of bioadhesives stemming from a wide variety of natural materials.

