



## CATEGORY NEWCO Winner



### ARACHNO

Arachno is a revolutionary technology that will help chemists to overcome bottlenecks in the organic synthesis processes and in nanoparticles synthesis processes. As a perfect mix of high tech solution and simplicity, arachno is low cost which makes it a perfect breakthrough technology. By using an arachno it is possible the stirring under inert atmosphere or rate reactions with any type of gas of up to six reaction mixtures. The reaction mixture could be cooled or heated and, if needed, could be also concentrated to dryness avoiding the time consuming multievacuation step. arachno also allows to conduct reactions with different solvents thanks to its expansion chamber that avoid any cross-contamination between reaction vessels. Arachno is useful in almost every moment of research. Arachno is a patented technology 100% Made in Italy. It is offered in various models suitable for all needs and fully customizable. arachno was developed in collaboration with leading Italian brands in the world of scientific glassware and design.

## Special mentions



### PHARMAFILM

Pharmafilm - spin-off of University of Milan is a company working on the development and licensing of novel drug delivery systems. The company has developed three effective platforms, which are able to incorporate a variety of active ingredients. a) *Orodispersible films* the technology is based on the use of maltodextrins as film forming material. The industrial scale up is demonstrated and the first drug product is expected to be

launched on the European market in 2017. b) *(Trans)dermal patches*: the feasibility of preparing a patch by using Eudragit NE and a large amount of a plasticizer was demonstrated. An agreement with a pharmaceutical company permits the production of clinical batches. c) *Mucoadhesive suspension*: the development of a mucoadhesive microgel based on carbopol and alginate allows the reduction and administration frequency of the active ingredient concentration with respect to a conventional oral sprays or mouthwashes.



## STELLAR MEDICINES FOR INHALATION: DRY POWDER INHALERS FOR LUNG

PlumeStars is an innovative start up, located in Parma, specialized in manufacturing by “particle engineering” of antibiotic powders for pulmonary administration to treat lung infections. Recent treatment guidelines recommend the use of inhaled antibacterial drugs against *Pseudomonas Aeruginosa*. Aerosolized antibiotics delivered to lung allow high drug concentrations while minimizing systemic exposure and toxicity. PlumeStars is the exclusive licensee of a technology for inhalable powders constructed using a very low amount of a lipophilic adjuvant (1% w/w). PlumeStars got the orphan designation both from EMA and FDA for amikacin inhalation powder. Other inhalable antibiotics are in development such as tobramycin powder, that presents higher respirability and lower amount of excipients compared to the marketed competitor, 1%w/w and 32 %w/w, respectively. The compliance and convenience, in terms of adherence to the therapy, of the patient is improved due to less side effects and shorter time administration.