



54ème colloque  
**ASRDLF**

5-7 juillet 2017, Athènes, Grèce



15th conference  
**ERSA-GR**



Les défis de développement pour les villes et les régions dans une Europe en mutation

## Regional European performances in Health R&I: Understanding possible causes of the divide among EU Regions

### Mr Claudio COZZA

AREA Science Park Researcher  
Padriciano, 99 IT-34149 Trieste Italy  
claudio.cozza@areasciencepark.it

### Mme Monica PLECHERO

University of Venice Ca' Foscari Research Fellow  
Dorsoduro 3246 IT-30123 Venice Italy  
monica.plechero@unive.it

### Mme Raquel ORTEGA ARGILES

Birmingham Business School Professor  
Ash House, Edgbaston B15 2TT Birmingham UK  
R.OrtegaArgiles@bham.ac.uk

### Référence à la session / reference to the session

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### Résumé / Summary

Health represents one of the thematic priorities for smart specialisation. Not by chance, Health appears as one of the top policy investment priorities chosen by EU member states and regions in their RIS3, although they might target it from very different perspectives. That is, referring to Health when dealing with smart growth looking at the competitiveness of the Pharmaceutical, Biotech or Medical technology sectors; under the umbrella of inclusive growth when dealing with ageing population; or dealing with inclusive growth when addressing Healthcare innovation, such as e-Health governance.

Until now the difficulty in properly measuring research and innovation (R&I) in Health sector has represented a barrier to address specific policies in favour of less performing regions. This is due to two factors: a lack of available data particularly at regional level; and the difficulty in clearly defining the boundaries of the Health sector. Data provided by European Commission, focusing on Health as FP7 thematic priority, as well as recent data on ongoing clinical trials and Health infrastructure at regional level developed by university of Trieste allow to deeper investigate the mechanisms supporting R&I in European Regions. In particular, data provided by the European Commission are almost unique in their regional/sectoral breakdown, both in the

case of scientific publications and patents, for all EU regions.

The paper provides an analysis of possible determinants of EU regional Health R&I inequalities, disentangling the factors related to publication propensity from those related to patent propensity. Two hypotheses are tested: H1) Important factors influencing Health R&I performance in Europe are regional high investment in R&D, a good attitude to international collaboration, but also a regional system with good organizational, human resources and institutional potential. H2) Factors determining patents and publications propensity in Health may be of different nature.

The results show that despite one of the most relevant determinants of R&I in the Health sector remains the level of R&D expenditure, other factors such as the size or degree of Health specialisation of the region should also be taken into account. While patenting activity in this sector remains a prerogative of regions with already technological and industry capacity, publications activities result less context specific being present also in peripheral regions. Our results are in line with the new place-based smart specialisation-type policy thinking.

Keywords: Health, patents, scientific publications, EU regions, smart specialisation.

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