30<sup>th</sup> March 2022 - RISIS course on Thematic and spatial analysis of technology

# Comparison of inventive activities in the German Chemical and Pharmaceutical sectors in 2010-2015

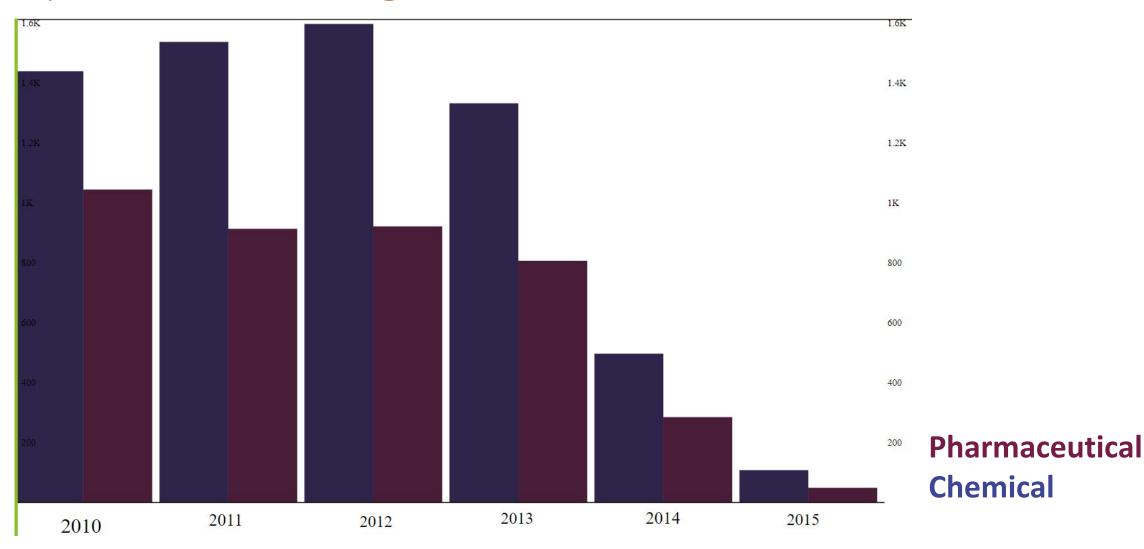


Group 5:

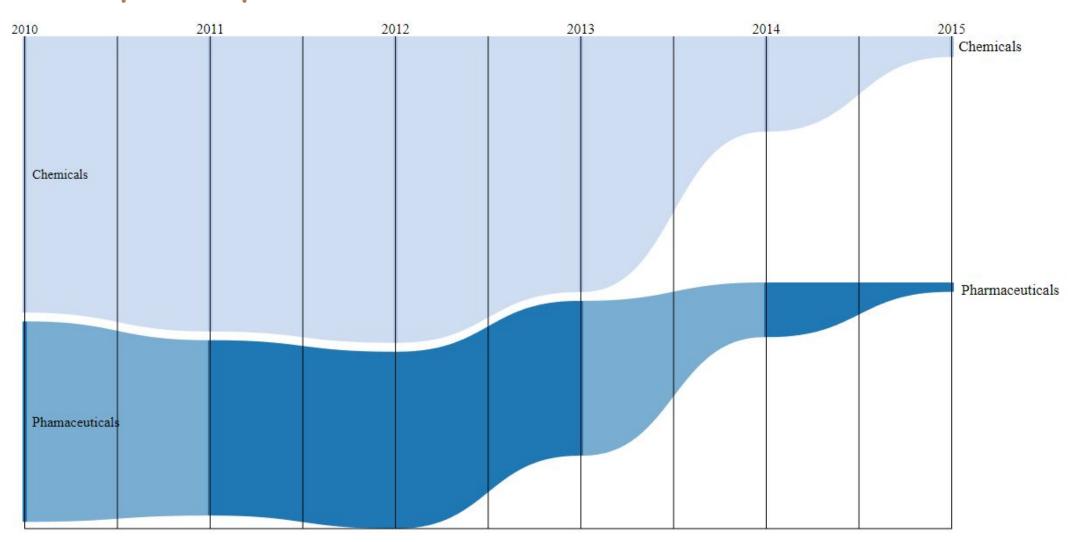
Valentina Bucaioni, University of Siena (Italy) Özgür Özer, METU (Turkey)

Mihaela Covrig, Bucharest University of Economic Studies (Romania)

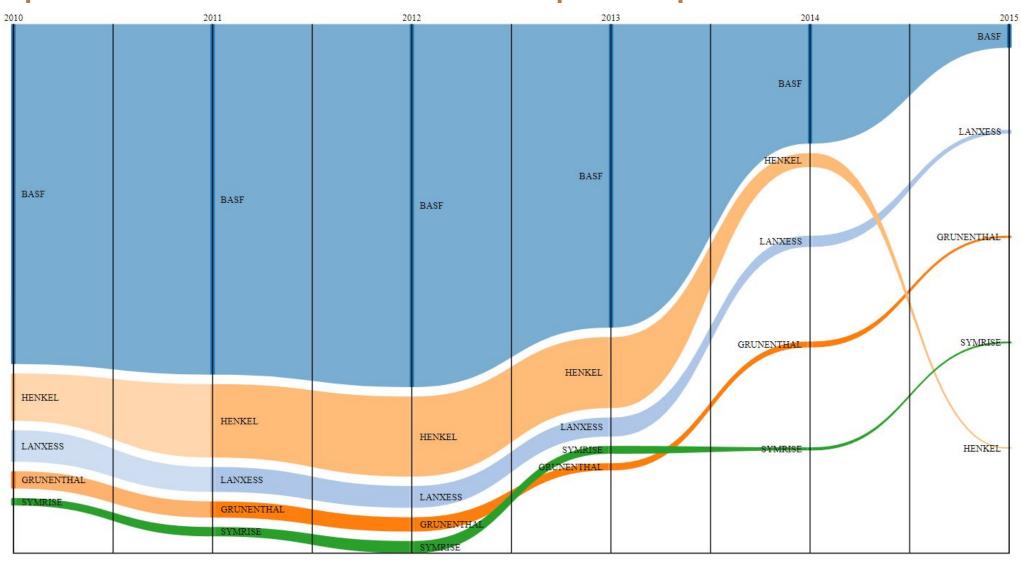
## Comparison between chem and pharma #patents - Histogram



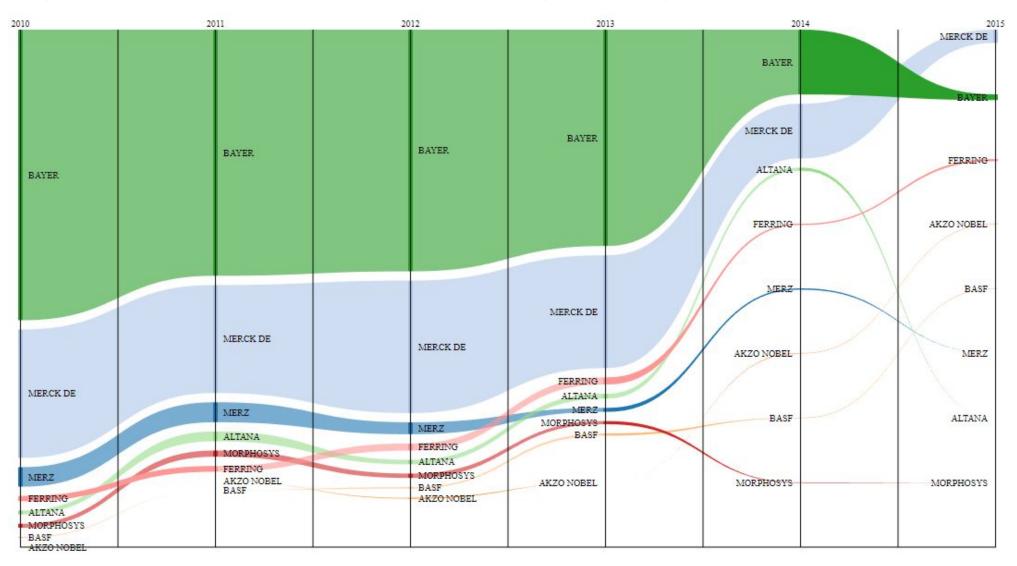
## Comparison between chem and pharma patents - Bump Graph



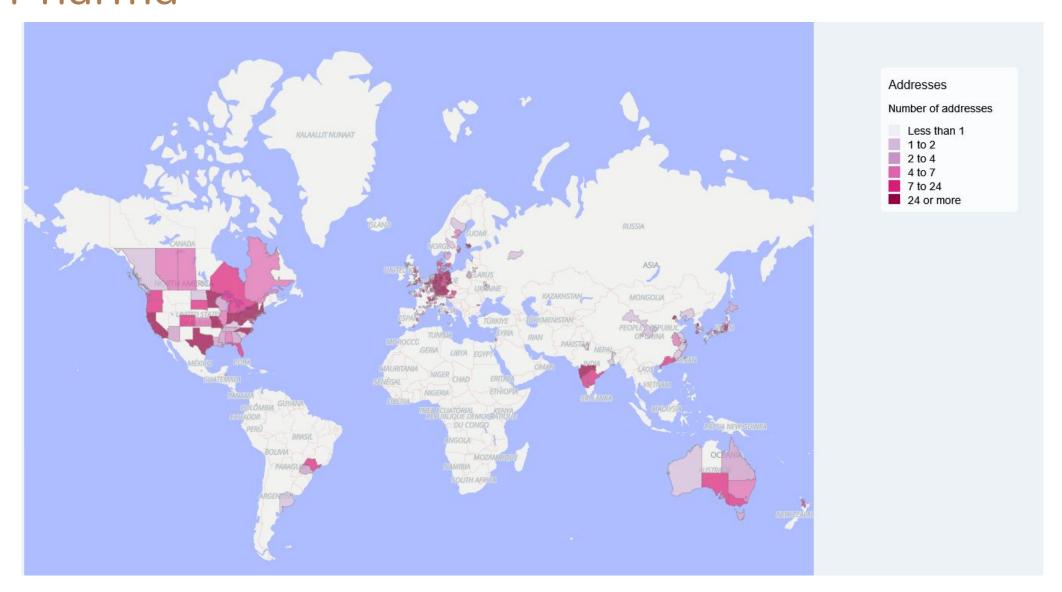
#### Top Chemical Firms - Bump Graph



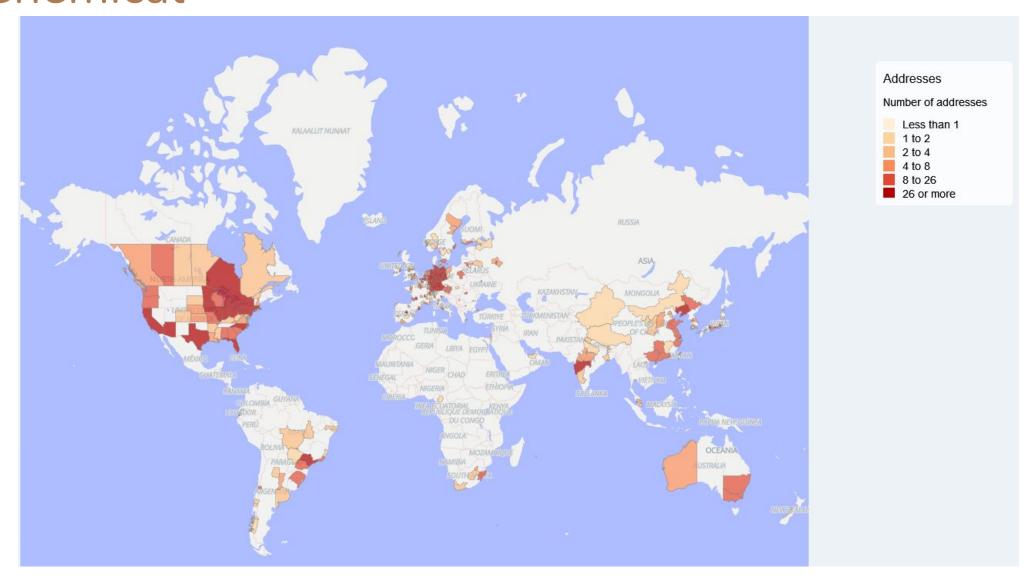
#### Top Pharma Firms - Bump Graph



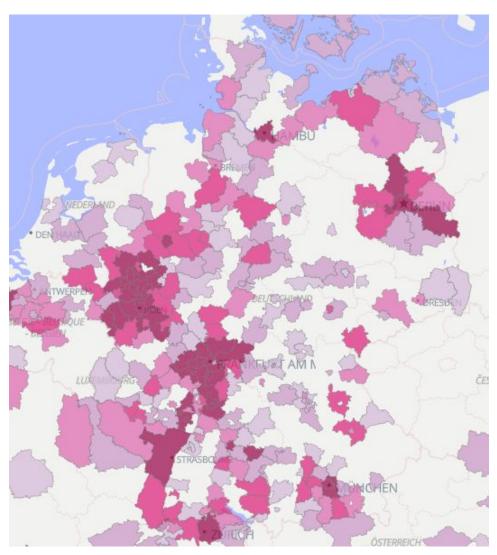
### Spatial worldwide distribution of inventors - Pharma

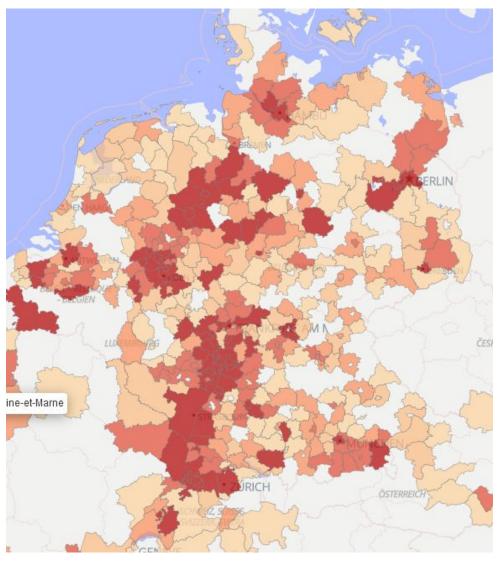


#### Spatial worldwide distribution of inventors - Chemical



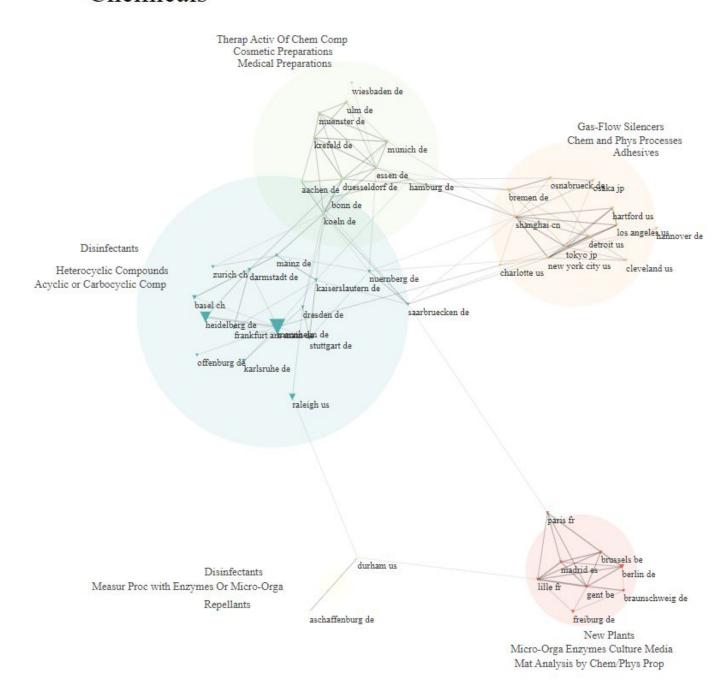
### Spatial German distribution of inventors - Pharma VS Chem





# Technological clusters among Chemical industries



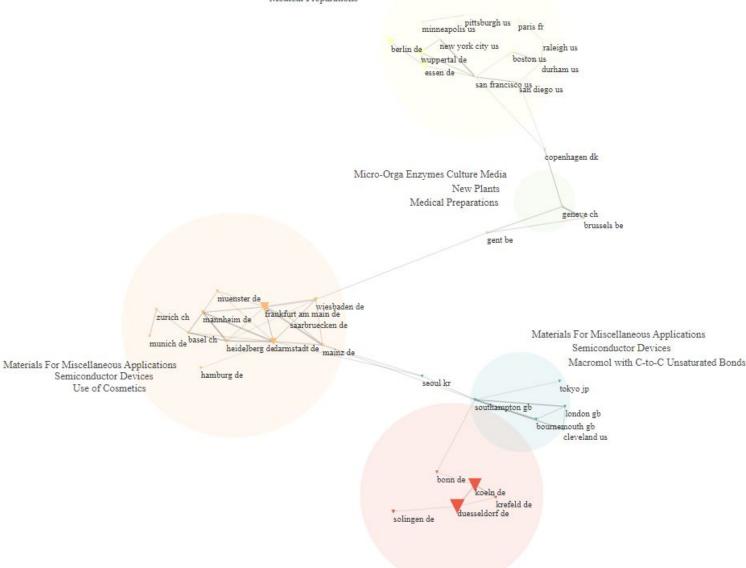


# Technological clusters among Pharma industries

2010-2015

#### Pharma

Therap Activ Of Chem Comp Devices for Introducing Media in Body Medical Preparations



Disinfectants

Macromol withouth C-to-C Unsaturated Bonds

#### Contingency matrix Firm and sector

