

## Allegato 2 – Tematiche di ricerca Spoke n. 1

1. Single-neuron correlates of social cognition and interaction in human cerebral cortex during awake surgeries.  
**Costo massimo: 210.000 €**
2. The role of subcortical brain structure in social information processing through structural and functional MRI in human and non-human primates with and without intact visual cortex.  
**Costo massimo: 190.000 €**
3. Anatomic-functional characterization of cortical and subcortical circuits involved in action observation in human and non-human primates with 7T ultra-high field MRI.  
**Costo massimo: 190.000 €**
4. Seeking for biomarkers that can predict neurodevelopmental disorders in preterm and very preterm babies: a structural/functional connectivity-based approach.  
**Costo massimo: 170.000 €**
5. Atlas of structural and functional connectivity of the vestibular network in human neonates and infants.  
**Costo massimo: 180.000 €**
6. Optimizing the chemistry of antisense oligonucleotides and their formulation in non-viral particles through a high-frequency oscillatory motion device: moving towards clinical use of RNA therapeutics for neurodevelopmental disorders.  
**Costo massimo: 180.000 €**
7. Study of the effects of early-life stress and of the fast-acting antidepressant Ketamine in Shank2 and Shank3 mutant mice to model comorbid psychiatric symptoms in neurodevelopmental disorders.  
**Costo massimo: 150.000 €**
8. Role of maternal exposure to psychosocial stressors during pregnancy in the aetiology of autism-spectrum disorders: characterization of a non-genetic animal model for ASD.  
**Costo massimo: 160.000 €**
9. Therapeutic exploitation of tumor-educated macrophages for neural development and regeneration.  
**Costo massimo: 200.000 €**
10. Advanced cellular electrophysiological and imaging approaches to tackle complexity and identify multiorgan phenotypes in channelopathies.  
**Costo massimo: 180.000 €**
11. Software for volumetric reconstruction of neuroanatomical data from histological sections and integration with Magnetic Resonance Imaging.  
**Costo massimo: 200.000 €**