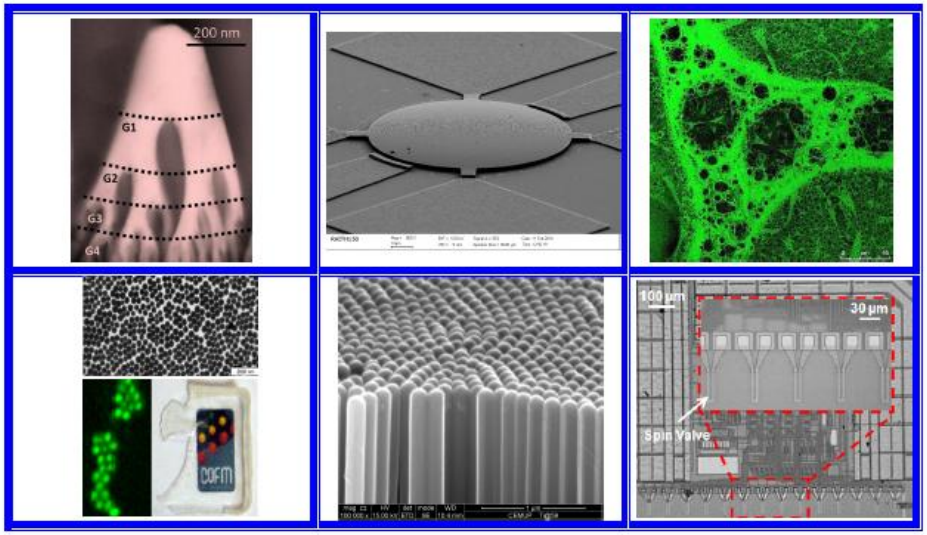
Institute of Nanoscience and Nanotechnology

Associated Laboratory
(www.in-nano.net)



Member Research Centers:

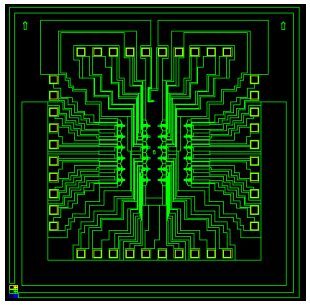
INESC MN (coordinator)
CQFM – IST
IFIMUP – U. Porto

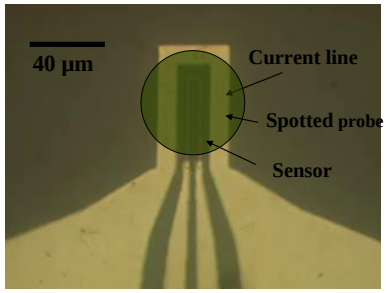
Our mission

- **leading edge research and development** in strategic technological areas of micro- and nanotechnologies, nanosciences, and the application of these technologies to electronic, biological and biomedical devices.

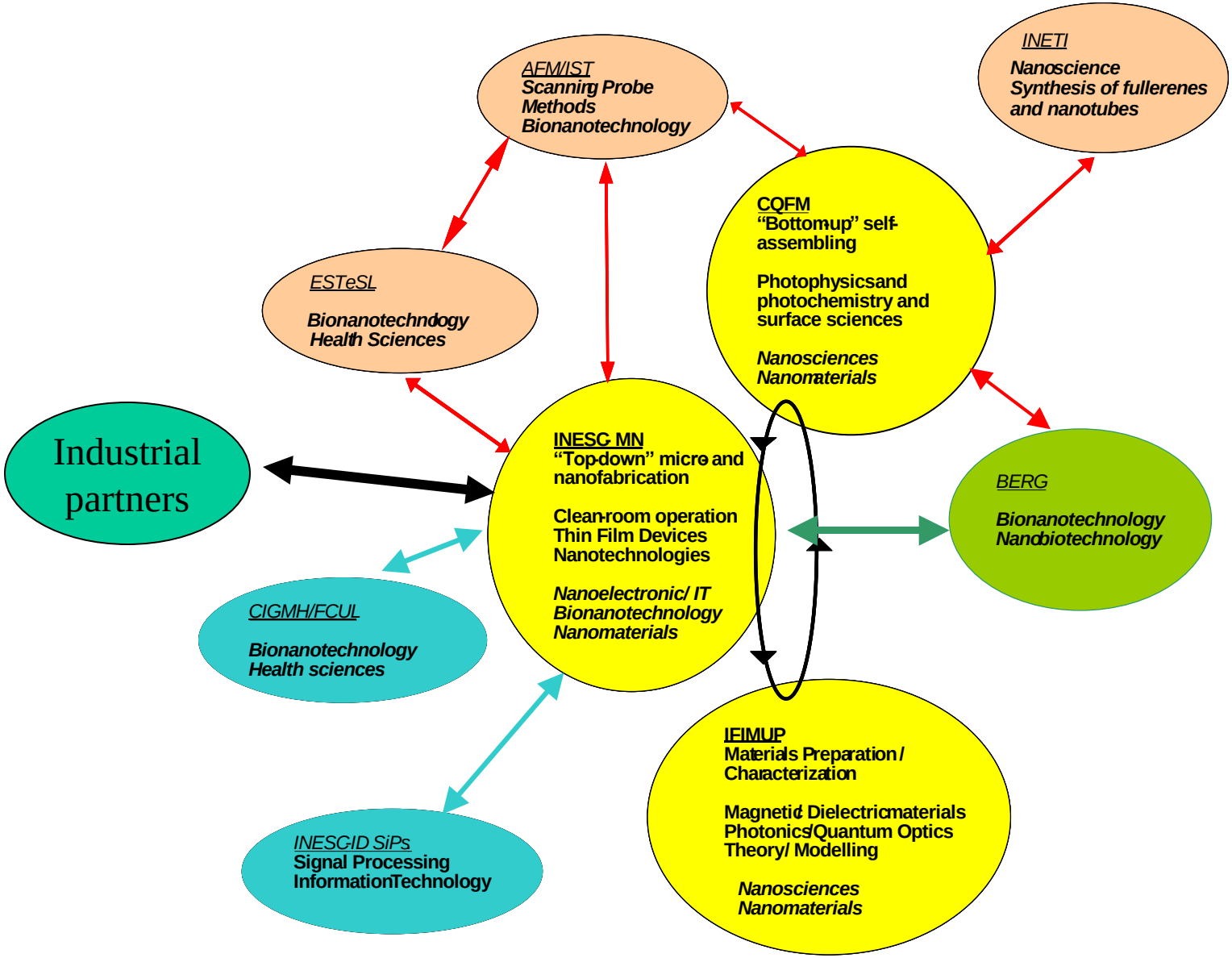
- **advanced training** of young scientists and engineers at the university, post-graduate and post-doctoral levels in micro- and nanotechnologies

- **transfer of technology** to both Portuguese and international industries through collaborative research, contract research, prototyping and consulting.





INN Team - Interactions of scientific areas



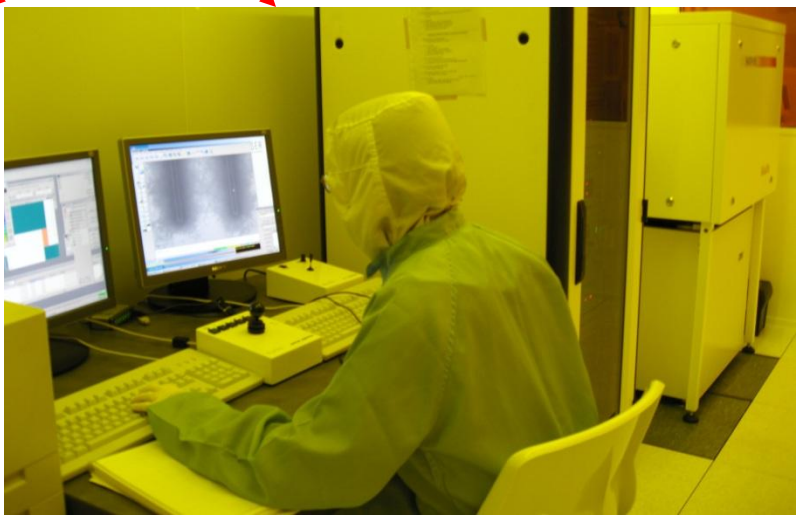
Human Resources

To give an idea of the dimension of IN, the table below shows the composition of the IN team on 31 December 2012

	INESC MN	CQFM	IFIMUP	TOTAL
Total Integrated Permanent PhDs	5	12	14	31
Total Post-Docs	7,5	12	11,5	31
Total Ciencia Researchers	2	3	2	7
TOTAL PhDs	**14,5**	**27**	**27,5**	**69**
Total PhD students	12	9	13	34
Collaborators	2	1	11	14
Research Fellowships (BI)	3	10	13	26
Technical and Adminstrative Staff	5	1	5	11
TOTAL PERSONNEL	**36,5**	**48**	**69,5**	**154**

Major Infrastructure. INESC MN clean room

- Class 100/10 cleanroom (~150 m^2) constructed in 1992/1993
- Silicon backend processing for feature sizes down to 1.2 µm , 6” and 8” wafers
- Class 10,000 area for support equipment and film deposition laboratory (~150 m^2)
- Laboratories for film and device characterization
- New RAITH 150 e-beam lithography system – installed October, 2006 (20 nm features)



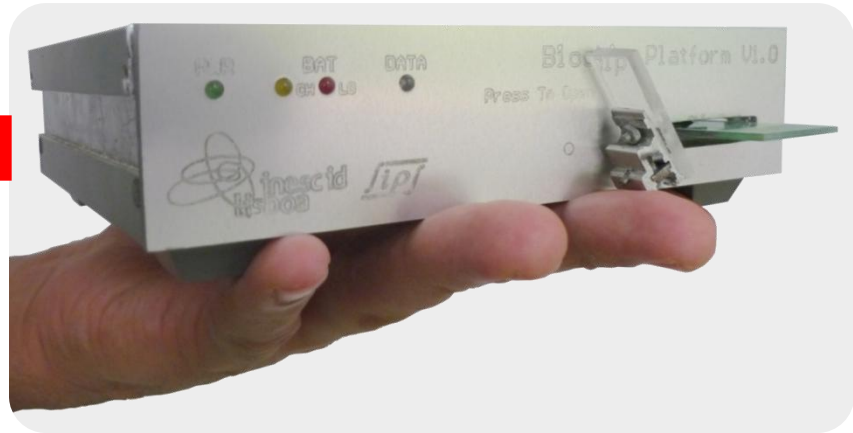
Blood finger-prick

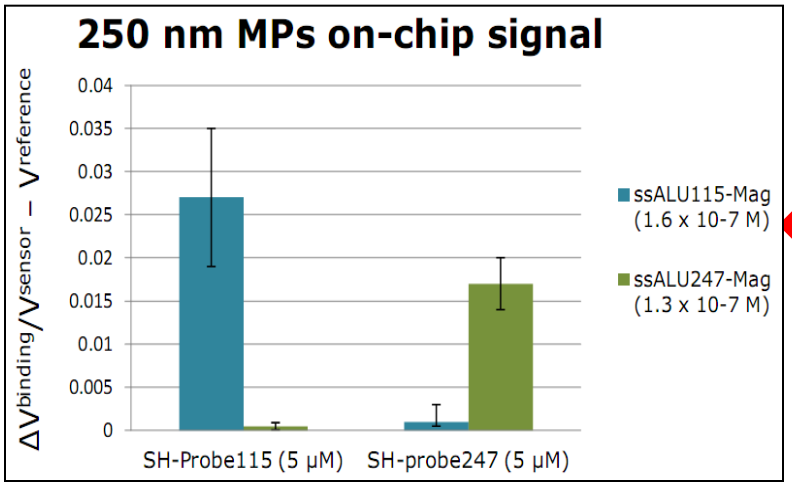
Sample preparation step

separation of plasma from blood cells

Plasma injected in the detection chip

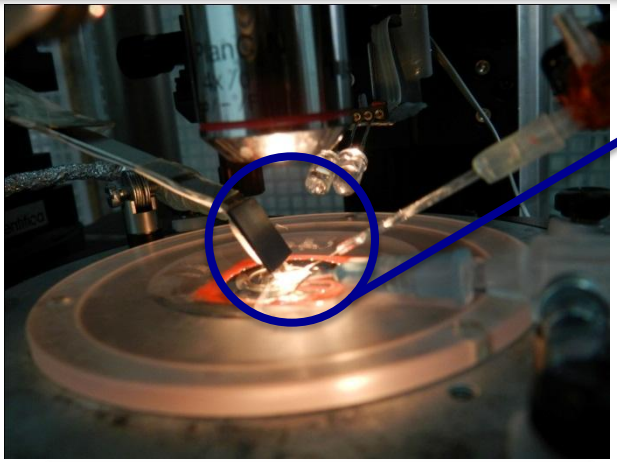
Measurement of the chip



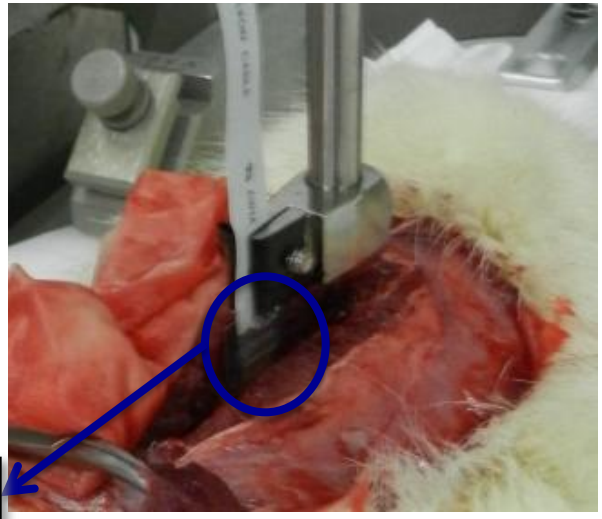


Experiments background

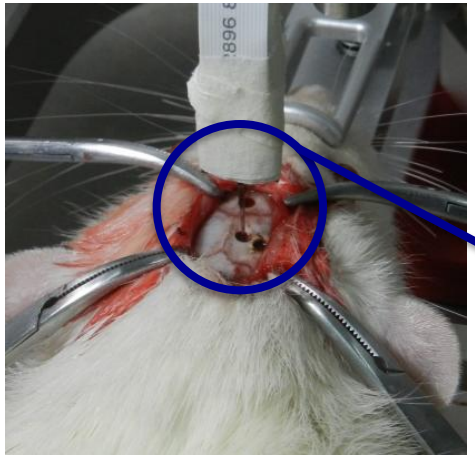
Different experiments in rats



In Vitro - Brain Slice

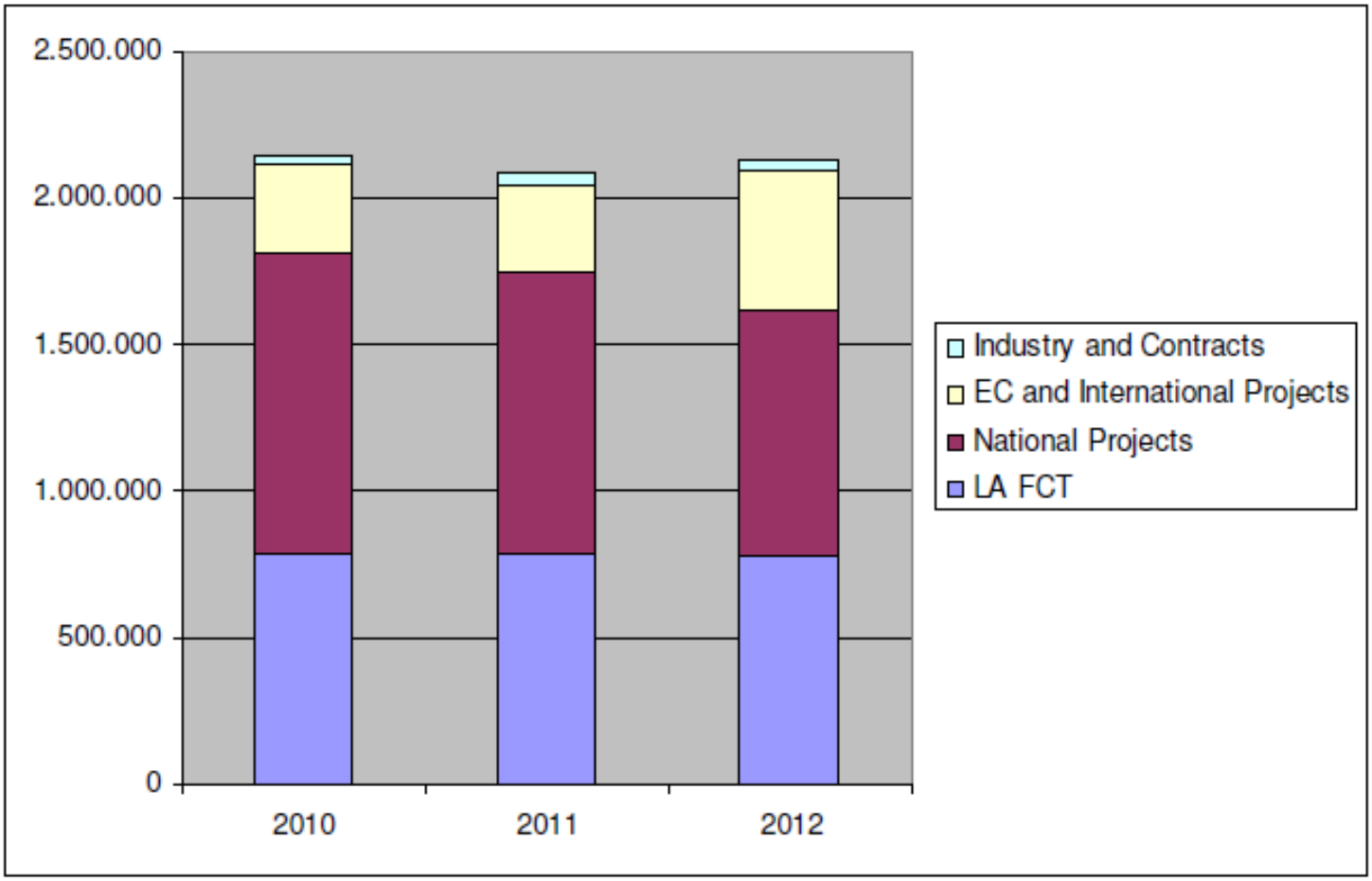


In Vivo - Spinal Cord



In Vivo - Brain

Total IN funding by year



Students trained at IN are now in:

- Portuguese and International companies such as:

  -Portuguese: Nanium/Qimonda, Lusospace, Biosurfit, PT, Autoeuropa, Renova, Soporcel,...

  -International: ASML-NL, TDK-Japan, Honeywell-CH, Freescale-US, Seagate-US, Sinomagnetics-CH, Infineon-GE, Philips Netlab ND, Bosch-GE, TUEindhoven, Nordiko-UK, SAE-TDK/China, InSilicio-Fr

- Portuguese and International Universities and Research Centers such as:
  -Portuguese: INL, IST, U. Minho, U. Porto
  -International: Spintec, CEA/Leti, IMEC, Lanzhou Univ, Fudan Univ.,
  -Tongji Univ., UC Berkeley, U. Warsaw, U. Valencia, U. Zaragoza

Spin offs

- PicoSense (San Francisco, USA, 2012)
- MagSense (Portugal, in creation phase)