



# Vironova

## Experiences from FP7

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# Enabling Technology Platform

- Visualization of viruses, Virus-like particles (VLPS) and nanoparticles requires Transmission Electron Microscope (TEM)
- Digital cameras enable digital analysis of particles
- Vironova's unique software tools enable automated particle analysis
- One platform – Three business areas



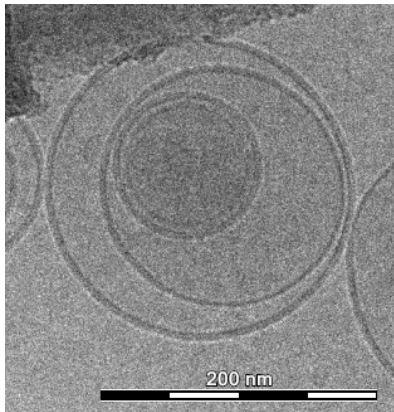
13 employees with specialized skills: Electron microscopy, Virology, Image analysis, Mathematics, Software development, Project management, Finance & Business Development.

# Business Areas

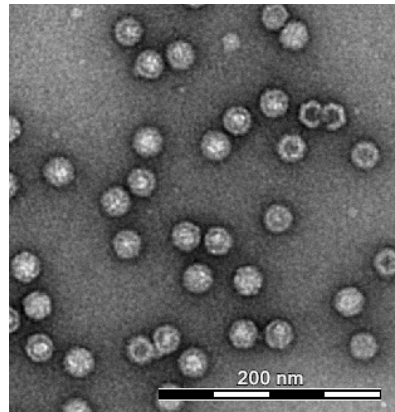
1. Development of novel antivirals against: HIV, Herpes and Influenzavirus
2. Services to the pharmaceutical industry to cut time and costs in viral related R&D and production of biological products.

# Particle Analysis:

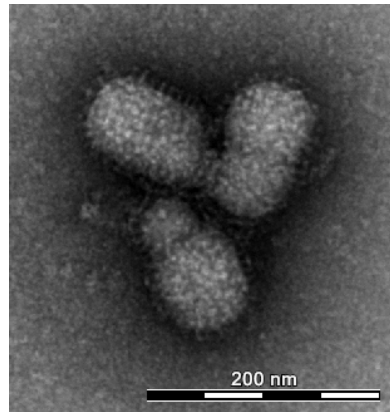
- Particles in nano-size range
  1. Drug delivery (liposomes)
  2. Gene delivery (virus-like particles, VLPs)
  3. Vaccines (viruses and organic nanoparticles)



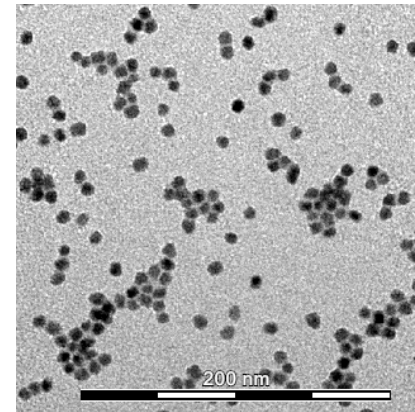
Liposomes



Virus-like particles

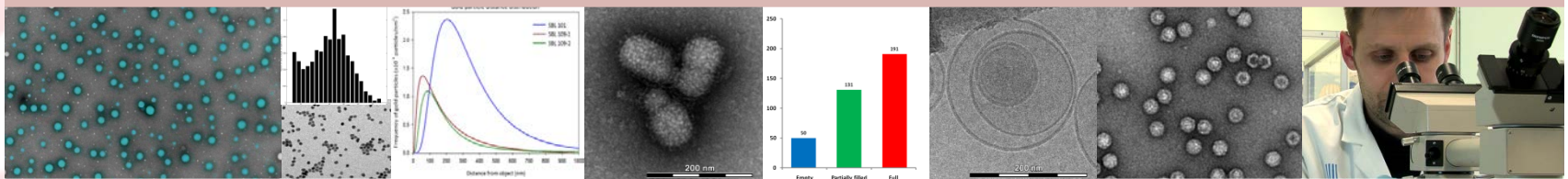


Influenza virus



Organic NPs

# Vironova – 5 EU funded projects



Project	Role	Description	Total EU	Funding to Vironova	Programme
FluDrugStrategy 2008-2010	CO	Novel Influenza drugs 5 partners, 30 months	1,5M€	0,5M€	Cooperation FP7-Health
I-CARE 2010-2013	P	Nanocomposites & regeneration of the Eye. 5 partners, 36 months	1,6M€	0,1M€	EuroNanoMed <i>FP7 supported</i> <i>ERA-NET</i>
Virus Entry 2009-2012	AP	Molecular Mechanisms of Cell Entry of Enveloped Viruses 5 partners, 36 months	3,8M€	100% direct costs	FP7 Marie Curie ITN network
FLUCURE 2010-2014	CO	IN NEGOTIATION: Influenza drug development, 9 partners, 48 months	6M€	1,2M€	Cooperation FP7-Health
VIDIA-Fish 2009-2010	CO	Fish virus diagnostics 3 partners, 12 months	150K€	67K€	EUREKA – <i>Not FP7</i>

# 1. Drug Discovery: FluDrugStrategy

**Title:** COMBATING INFLUENZA USING A NOVEL DRUG STRATEGY

**Acronym:** FluDrugStrategy

**EC contribution:** 1.498.396 €

**Partners:** CO: Vironova AB, SME (SE), Beactica AB, SME (SE), Vrije Uni Amsterdam (NL), Bulgarian Acad. Sci (BUL), Uni Freiburg (DE)

**Duration:** 30 months

**Starting date:** 01/03/2008

**Instrument:** Collaborative Project

## 2. I-Care

**Title:** Integrative nano-Composites And Regeneration of the Eye

**EC contribution:** 1.579.765 €

**Partners:** CO, Linköpings Uni (SE), Vironova AB, SME (SE), Hebrew U (ISR), Inst. Physics (LI), Mlase AG, SME (DE)

**Duration:** 36 months

**Starting date:** 01/03/2010

**Instrument:** EuroNanomed Project

### 3. Virus entry

**Title:** Molecular Mechanisms of Cell Entry of Enveloped Viruses

**EC contribution:** 3.844.893 €

**Partners:** Germany (CO, Humboldt,)(SME: Vironova),  
Utrecht Uni (NL), KI (SE), CNRS (FR), ETH Zurich (CH),  
Tel-Aviv Uni (ISR), Pasteur Inst (FR) Free Uni Berlin (GER)  
Capsulation Nanoscience AG (GE, SME)

**Duration:** 48 months

**Starting date:** 01/10/2009

**Instrument:** Marie Curie Initial Training Networks (ITN)



## 4. Drug Development: FLUCURE

**Title:** Development of novel antiviral drugs against Influenza

**EC contribution:** 5.844.893 €

**9 Partners: 4 SMEs:** Vironova (SE), Beactica (SE), Pike Pharma (CH), Pharmacelsus (DE) **5 Academia:** Vrije Uni Amsterdam (NL), Bulgarian Acad. Sci (BUL), Uni Freiburg (DE), Biotech. Inst. (LT), Uni studi di Siena (IT)

**Duration:** 48 months

**Preliminary Starting date:** 01/09/2010

**Instrument:** FP7-Health

# Why Coordinate an EU project?

**Funding for  
Influenza drug  
discovery and  
development**

**A means to develop  
& validate  
Vironovas platform  
technology**

**EU funding = stamp  
of approval for our  
antiviral concept**

**Developing strong  
international  
partnerships and  
collaborations**

**Leading the way  
forward in Europe**

**Patents  
services  
Value  
....Company growth**

# Why – participate?

**Funding for  
technical  
development and  
validation**

**Access to new  
customers**

**New business  
opportunities**

**Access to strong  
validation partners  
and reference  
customers**

**Access to world-  
class scientists**

**Access to  
technical facilities  
at universities**

# EU participation: Challenges and tips for SMEs

- Timeline can be long in SME terms: 12 months from submission of application to signed grant agreement
- High costs associated with project application (for the coordinator)
- Some Legal costs (IP issues etc) [www.ipr-helpdesk.org/](http://www.ipr-helpdesk.org/)
- Matching financing costs (25% for R&D, 50% for demonstrators)

# Thank-You

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