



# SupraChem Lab primul proiect Orizont 2020 ERA CHAIR din Romania: stadiu de implementare si sinergii cu alte tipuri de proiecte

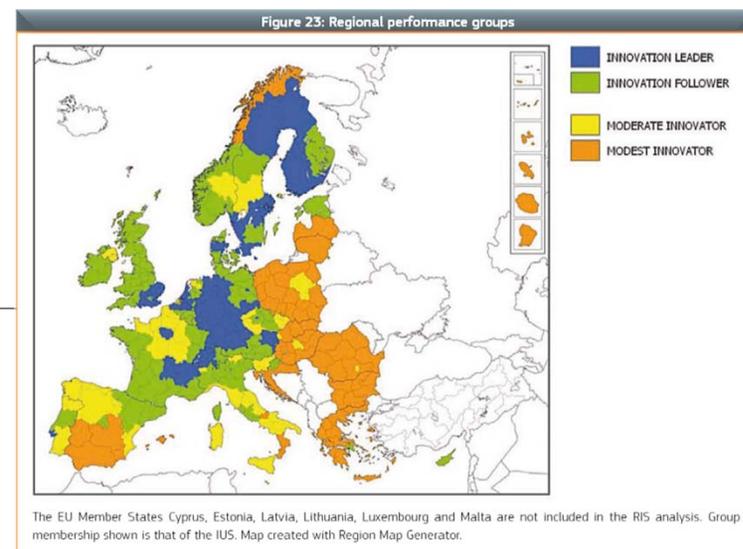
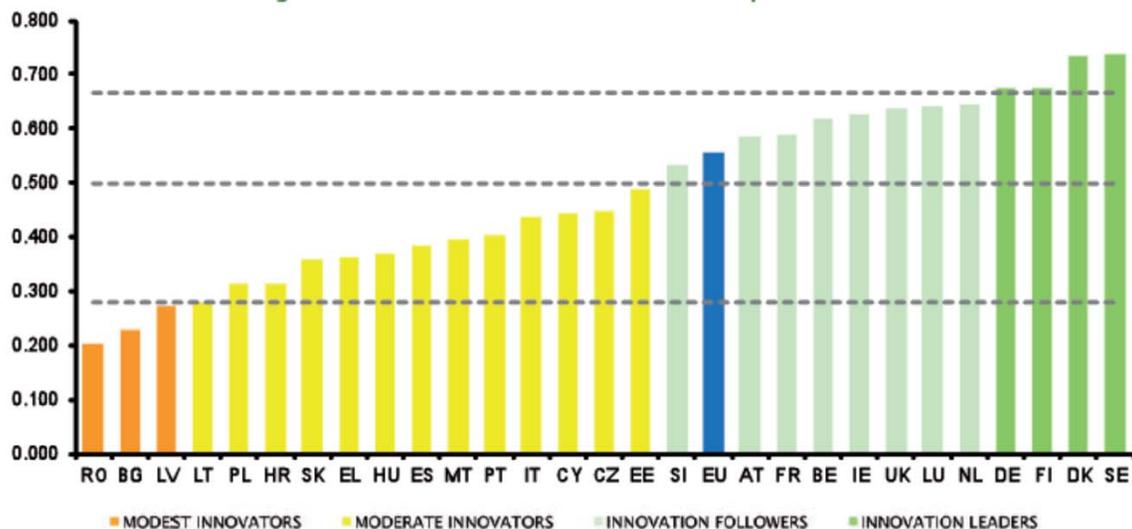
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Horizon 2020 - 15. Spreading Excellence and Widening Participation

Dr Teodora Rusu si Dr Mariana Pinteala

# Context European: Innovation Union Scoreboard 2015

Figure 3: EU Member States' innovation performance



The annual Innovation Union Scoreboard (IUS) provides:

- a comparative assessment of the research and innovation performance of the EU Member States
- the relative strengths and weaknesses of their research and innovation systems.

The IUS helps Member States assess areas in which they need to concentrate their efforts in order to boost their innovation performance.

# WIDESPREAD 2-2014 ERA Chairs

**OBIECTIV:** sprijin pentru universități și instituții de cercetare în atragerea și menținerea resurselor umane de înaltă calificare și implementarea schimbărilor structurale necesare pentru a atinge excelența pe o bază durabilă.

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**DESCRIERE:** cercetatori cu rezultate remarcabile în domeniul ales de cercetare. Organizațiile de cercetare vor prezenta o propunere care vizează facilitarea schimbărilor structurale pentru stimularea cercetării de excelență și atragerea de fonduri structurale și investiții europene.

**ACTIVITĂȚI ELIGIBILE:** măsuri care să faciliteze schimbările structurale în instituție.

**Titularul ERA Chair trebuie să fie un cercetător de top și manager de cercetare într-un domeniu științific, cu experiența dovedită într-o funcție de decizie**

Va fi angajat full-time sau partial în organizația aplicanta pentru o perioadă de 5 ani și va avea libertatea de a-și stabili echipa de lucru

**Nu se finanțează activități de cercetare!**

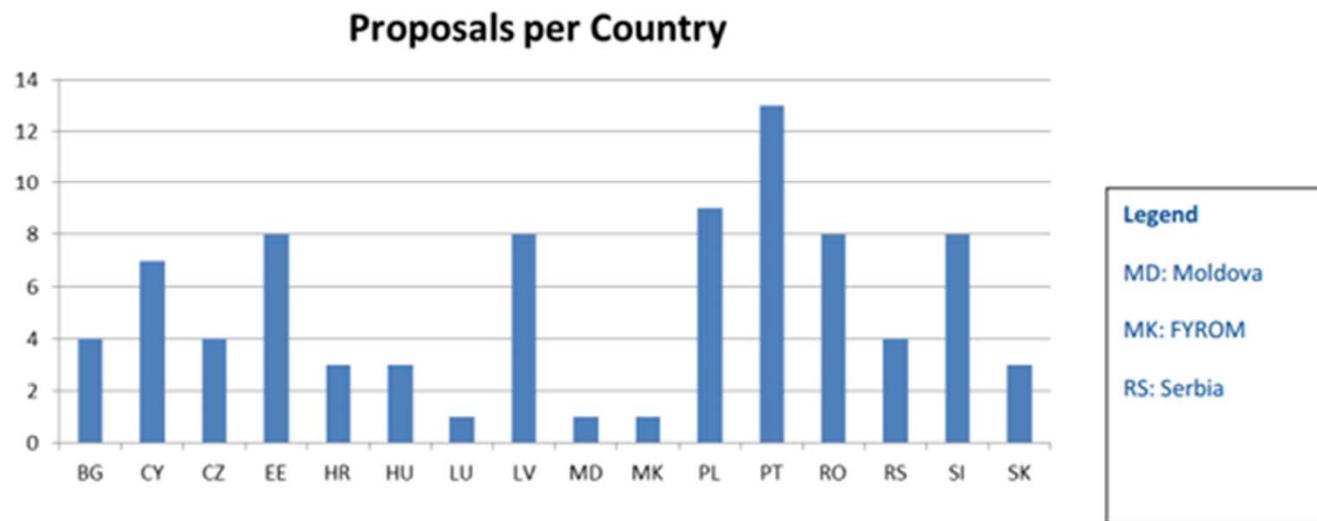
**INSTRUMENT:** Activități de coordonare și sprijin (90% costuri eligibile, salariul titularului ERA Chairs și a echipei sale de cercetare), contract cu o universitate sau instituție de cercetare situată în statele membre sau țările eligibile asociate, cu o durată de 5 ani.

Buget indicativ pe proiect: 2.5M

Call deadline: 15 October 2014

# WIDESPREAD 2-2014 ERA Chairs – submitted proposals

**88 proposals submitted**, of which **85** from eligible "Widening" countries



# SupraChem Lab challenges

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**Scientific strategy challenge:** improving PPIMC research agenda by creating a new research group in the field of supramolecular chemistry - hybrid materials for adaptive self-organized supramolecular structures.

**Staff Skills:** Reinforcing PPIMC IntelCentre by (a) rejuvenation of the decision staff by the ERA Chair recruitment; (b) recruitment of new researchers with different scientific expertise; (c) enrich the young researchers analytical knowledge and skills in mastering modern equipment.

**Internal communication:** The ERA Chair is expected to improve the internal dialogue and strengthening technical support within the other research group in PPIMC and this will lead to a much better utilization of Institute's research potential.

**Increase visibility:** The new group has dedicated activities targeting the connection of the SupraChem Lab group to PPIMC national and international cooperation network and also to enlarged this network.

# SupraChem Lab International Advisory Board

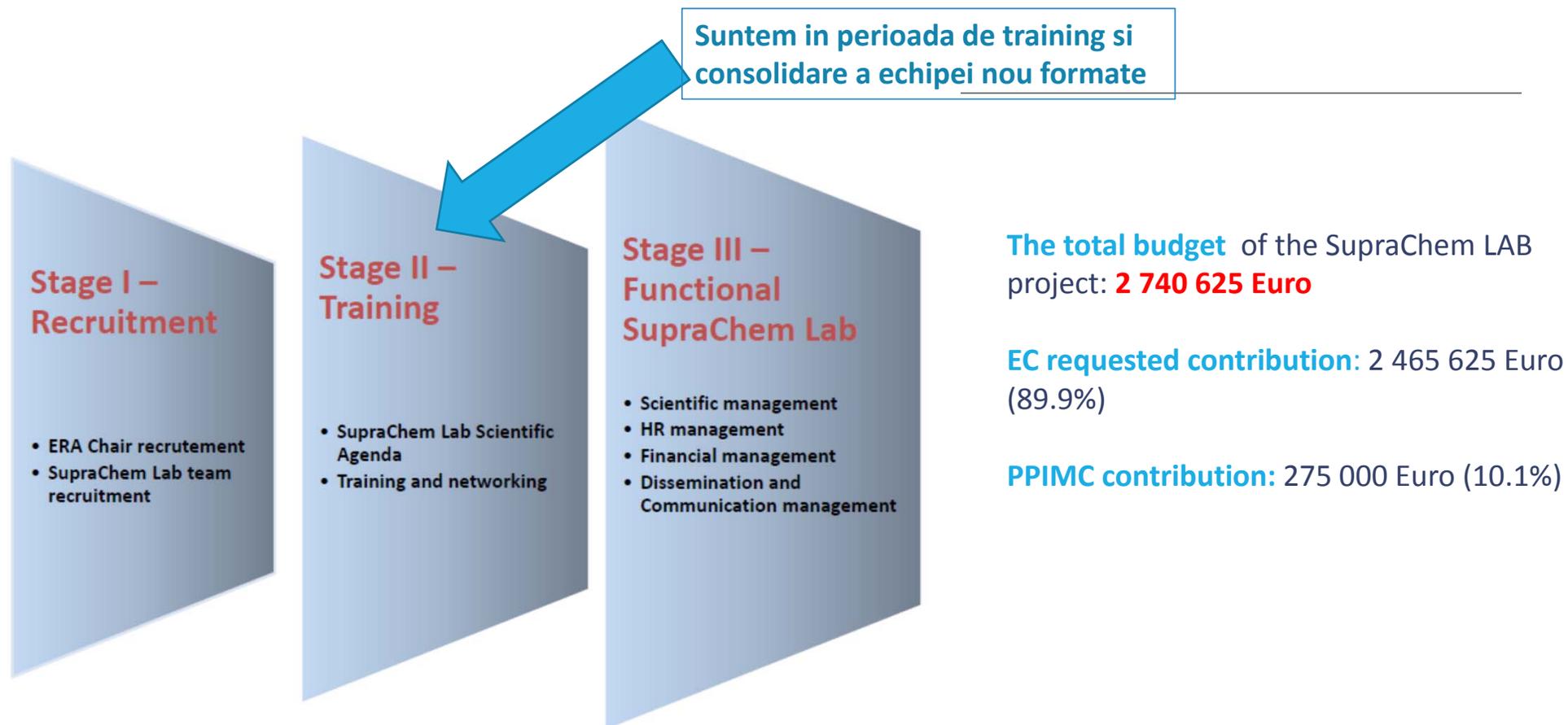
	Institution	Member of IAB	Main topic of research	Country
1.	<u>Institut de Science et d'Ingénierie Supramoléculaires</u> , University of Strasbourg,	Prof. Jean Marie-Lehn  <i>Chair of the <u>SupraChem Lab IAB</u></i>	Nobel Prize in Chemistry 1987 for synthesis of <u>cryptands</u> Supramolecular chemistry Chemistry of host-guest molecular assemblies	France
2.	Romanian Academy	Acad. Prof. Bogdan C. <u>Simionescu</u>	Macromolecular Chemistry Living polymerization Thermodynamics of complex systems	Romania
3.	Spanish National Research Council / Biological Research Centre	Prof. Dr. <u>Jesús Jiménez-Barbero</u>	Conformational properties of carbohydrates and analogues Molecular basis of carbohydrate interactions with proteins	Spain
4.	University of Bielefeld Faculty of Chemistry	Prof. Dr. Achim Müller	<u>Magnetochemistry</u> Structural Chemistry Materials Chemistry Bioinorganic Chemistry	Germany
5.	Namur Research Institute for Life Sciences ( <u>Narilis</u> )	Prof. Dr. <u>Stéphane Vincent</u>	Molecular biology Supramolecular complexes Bioinorganic Chemistry	Belgium
6.	KTH - Royal Institute of Technology Department of Chemistry	Prof Dr. Olof <u>Ramstrom</u>	<u>Molecular and supramolecular chemistry of multimetallic systems ;</u> <u>Magnetic and optical properties</u>	Sweden
7.	<u>Université de Strasbourg</u> , <u>Institut Charles Sadron – ICS</u>	Prof. Nicolas <u>Giuseppone</u>	Synthetic organic chemistry, Supramolecular chemistry, Self-assembled materials.	France
8.	<u>University of Florence</u> , <u>Neurofarba Dept.</u> , Firenze	Prof. <u>Claudio T. Supuran</u>	Medicinal chemistry, Heterocyclic chemistry, Enzyme inhibitors and activators, Chemistry of <u>sulphonamide</u>	<u>Italy</u>

# SupraChem Lab National Advisory Board

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1. **Acad. Prof. Bogdan C Simionescu** - Vicepresedinte al Academiei Romane
  2. **Prof. Dr. Nicolae Hurduc** - Universitatea Tehnica "Gh. Asachi"
  3. **Gabriela Dobos / Iuliu Jica** – Autoritatea Nationala pentru Cercetare Stiintifica si Inovare, OI Biroul regional NE Iasi
  4. **Gabriela Macovei** - Agentia de dezvoltare regionala NE
  5. **Gabriela COMAN** – Punct de contact regional pentru Enterprise Europe Network – Parcul tehnologic Tehnopolis Iasi
  6. **Dr. Cristina Vlase** - ANTIBIOTICE SA, Iasi, Romania
- 
1. **Dr. MD Anca Chiriac** – Centrul de medicina preventiva, Iasi, Romania
  2. **Dr. Vasile Avadanei** – Coordonatorul regional al asociatiei Intreprinderilor Mici si Mijloci – Regiunea NE

# SupraChem lab project implementation stages



# 01.07.2015 SuperChem Lab Started

Activitatea I Selectia si angajarea SupraChem Lab ERA CHAIR

The screenshot shows a web browser window displaying the EURAXESS website. The URL in the address bar is [ec.europa.eu/euraxess/index.cfm/jobs/jobDetails/34023353](http://ec.europa.eu/euraxess/index.cfm/jobs/jobDetails/34023353). The page header includes the European Commission logo and the text 'EURAXESS Researchers in Motion'. Below the header, there is a navigation bar with 'JOBS', 'SERVICES', 'RIGHTS', and 'LINKS'. The main content area features a 'Job details' section with a back arrow, a job title 'ERA CHAIR in suprmolecular chemistry', and a description: 'The ERA CHAIR is a newly created position within "Petru Poni" Institute of Macromolecular Chemistry (PPIMC), Iasi, Romania in the framework of SupraChem Lab CSA WIDESPREAD 2-2014: ERA Chairs Project that aims to establish a competitive research group in the field of suprmolecular chemistry - biologically inspired systems for targeted medical and environmental applications.' There is an 'Apply Here' button and a section for 'Other job details' showing the EURAXESS ID (34023353) and Country (ROMANIA). A blue arrow points from the 'Apply Here' button to the application information on the right.

Aplicatie online la adresa:

[www.intelcentru.ro/suprachem\\_lab](http://www.intelcentru.ro/suprachem_lab)

Data limita de aplicare a fost:  
15.08.2015

Procesul de selectie a ERA CHAIR s-a  
incheiat

10.10.2015



# SupraChem Lab ERA CHAIR: Dr. Mihail-Dumitru Barboiu

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**Dr Barboiu este in prezent director adjunct al Institutului European de Membrane de la Montpellier Franta.**

Doctor in stiinta din 1998 -Universitatea din Montpellier, Franta si conferentiar dupa care a urmat un stagiul postdoctoral la College de France (1999) in laboratorul Prof. J.-M. Lehn (Premiul Nobel Chimie-1987).

2004 castiga unul dintre cele mai prestigioase premii ale cercetarii europene: "European Young Investigator Award" devenind coordonatorul grupului "Nanosysteme Supramolecular Adaptive" la Institutul European de Membrane din Montpellier.

**Activitatea stiintific a Dr Barboiu poate fi sistematizata in:**

**150 articole in reviste cu factor de impact mare; Inticele H total de 35 si un total de 2860 citari**

***Peer review publications – 216***

***Books and Chapters – 17***

***Patents-4***

***Peer review papers 167***

***Peer review proceedings –28***

***Invited lectures and communications -311***

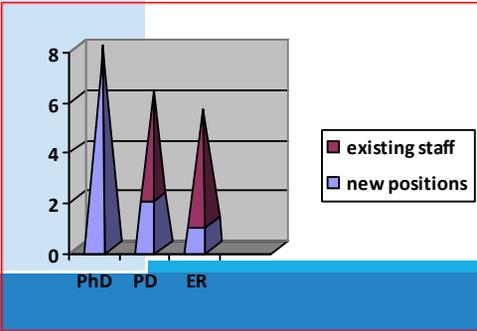
# *Suprachim Lab – Scientific and Management Plan - I Domenii stiintifice*

Project 1: Dynamic Interactive Systems for Constitutional Water and Ion Channels	Project 2: Constitutional systems for DNA transfection and drug delivery	Project 3. Dynamic networks and gels for delivery, cell recognition and cell growing	Project 4. Modelling and Theoretical chemistry of constitutional systems
<p><b>Supervision/trainer</b>            Prof. Joao Crespo – IAB            Prof. Achim Muller –T            Dr. Arie van der Lee –T</p>	<p><b>Supervision/trainer</b>            Prof. Nicolas Giuseppone –IAB            Prof. Olof Ramstrom – IAB            Prof. Dr. Andriy Mokhir –T            Prof. Bernold Hasenknopf – T</p>	<p><b>Supervision/trainer</b>            Prof. Stephane Vincent – IAB            Prof. Olof Ramstrom – IAB            Prof. Claudiu Supuran – IAB            Dr. Teodor Aastrup –T            Dr. Narcis Avarvari – T</p>	<p><b>Supervision/trainer</b>            Prof. Marc Baaden –T            Prof. Bernold Hasenknopf – T            Prof. Olof Ramstrom – IAB</p>

# Suprachim Lab – Scientific and Management Plan – II Management Resurse Umane

Media de varsta a echipei 34 ani !!!

Project 1: Dynamic Interactive Systems for Constitutional Water and Ion Channels	Project 2: Constitutional systems for DNA transfection and drug delivery	Project 3. Dynameric networks and gels for delivery, cell recognition and cell growing	Project 4. Modelling and Theoretical chemistry of constitutional systems
<p>ER – part time 50% - PPIMC existing staff - Group leader-chemistry</p> <p><b>PD –full time – nou angajat fizician</b></p> <p><b>PD – full time – nou angajat sinteza chimica</b></p> <p><b>PhD - full time – nou angajat sinteza chimica</b></p>	<p>ER – full time - PPIMC existing staff - Group leader-chemistry</p> <p>ER –part time 25% - PPIMC existing staff -chemistry</p> <p>ER – part time 50% - PPIMC existing staff - nanosciences</p> <p>PD – part time 50% - PPIMC existing staff –biology</p> <p>PD – part time 25% - PPIMC existing staff biology</p> <p>PD – part time 25% - PPIMC existing staff chemistry</p> <p><b>PD –full time – nou angajat biochimie</b></p> <p><b>PhD - full time – nou angajat sinteza chimica</b></p>	<p>ER – part time 25% - PPIMC existing staff - Group leader-chemistry</p> <p>ER – part time 25% - PPIMC existing staff -biochemistry</p> <p>ER –to be recruited-chemistry</p> <p>PD – part time 25% - PPIMC existing staff –physical chemistry</p> <p>PD – part time 25% - PPIMC existing staff biology</p> <p><b>PD - full time – nou angajat sinteza chimica</b></p> <p><b>PhD - full time – nou angajat sinteza chimica</b></p> <p><b>PhD - full time – nou angajat sinteza chimica</b></p>	<p>ER – part time 25% - PPIMC existing staff - Group leader-chemistry</p> <p>ER – part time 50% - biology</p> <p>PD – part time 50% - PPIMC existing staff –chemistry</p> <p><b>PD - full time – nou angajat chimie computationala</b></p> <p><b>PhD - full time – nou angajat chimie computationala</b></p>





# Primul training SupraChem Lab

## 05-06.05.2016

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- **Prof. Bernold Hasenknopf (Sorbona University, Faculty Pierre et Marie Curie, Paris, France)** a prezentat aspecte din chimia moleculara si supramoleculara a polioxometalatilor, precum si aplicatiile polirotaxanilor in imagistica medicala

- **Prof. Olof Ramström (Royal Institute of Technology, Department of Chemistry-Organic Chemistry, Stockholm, Sweden)** s-a axat pe aspecte ale chimiei dinamice utilizata in sinteza si cataliza, particularizand pentru cazul sintezei si aplicatiilor gliconanomaterialelor.

- **Dr. Marc Baaden (Laboratoire de Biochimie Théorique, CNRS, Paris, France)** a prezentat utilizarea microscopiei computationale in studierea proceselor membranare.

De mare interes s-au bucurat si prelegerile sustinute de invitatii de la **Universitatea de Medicina si Farmacie "Grigore T. Popa" din Iasi:**

- **Prof. Liliana Verestiuc (Facultatea de Bioinginerie Medicala)** a prezentat o serie de nanomateriale polimerice produse in scopul utilizarii lor in medicina si farmacie

-**Prof. Lenuta Profire (Facultatea de Farmacie)** s-a referit la rolul medicamentelor anti-inflamatoare nesteroidiene atat in terapia uzuala, cat si in cercetare.



# Suprachem Lab – sinergii cu alte tipuri de proiecte

## Planul National de Cercetare-Dezvoltare si Inovare – PNCDI III pentru perioada 2015-2020

PREMIERA PARTICIPARII LA ORIZONT 2020 (PN-III-CEI-SUPPORT-PO)

**SupraChem Lab – Suport**



15% din valoarea finantarii Europene a SupraChem Lab

Solicitare de finantare depusa pe 04/06/2016 -  
In curs de evaluare

**Actiune suport de premiere a proiectului Orizont 2020 WIDESPREAD 2-2014 ERA CHAIR, GA nr. 667387**

**Proiectul PNCDI III SupraChem Lab – Suport va fi direcționat pentru finanțarea prioritara a activităților de cercetare precum si activităților de diseminare a rezultatelor proiectului.**

- Activitățile de cercetare care vor fi finanțate in cadrul proiectului **SupraChem Lab – Suport** sunt organizate conform planului științific stabilit in cadrul proiectului **SupraChem Lab**
- Proiectul **SupraChem Lab – Suport** va direcționa majoritatea cheltuielilor către **Cheltuieli privind stocurile** care includ principalele cheltuieli materiale necesare activităților de cercetare: chimicale, reactivi specifici, kituri biologice, sticlărie, consumabile, etc.
- **SupraChem Lab – Suport** include **cheltuieli de deplasare** care vor fi direcționate in principal activităților de diseminare a rezultatelor proiectului precum si participării la diverse reuniuni de networking cu potentiali colaboratori.
- **Pentru a evita suprapunerea de linii de finanțare, SupraChem Lab – Suport NU se solicita cheltuieli de capital.**

# Suprachim Lab – sinergii cu alte tipuri de proiecte

## Fonduri Structurale (Programul Operațional Competitivitate 2014-2020)

**Acțiunea 1.1.3: Crearea de sinergii cu acțiunile de CDI ale programului-cadru ORIZONT 2020 al UE și alte programe CDI internaționale**

**Tip CATEDRE-ERA:** proiectele pentru catedre ERA ale Orizont 2020 - „ERA Chairs” cu scopul de a atrage cadre universitare și cercetători de renume în instituții care prezintă potențial de cercetare de excelență, pentru a sprijini aceste instituții să-și deblocheze potențialul, creând în felul acesta o bază pentru CDI în ERA. **Proiectele CATEDRE-ERA din cadrul acestei acțiuni vor finanța investiții pentru dezvoltarea infrastructurii CD în departamentele organizațiilor de cercetare care au câștigat finanțare pe proiecte „ERA Chairs” la competițiile Orizont 2020**, în timp ce Orizont 2020 va finanța costuri de personal și administrative.

**Valoarea asistenței financiare nerambursabile:** maxim 20 milioane lei.

**Durata proiectelor:** maxim 36 de luni.

**Data începere consultare:** 01 Noiembrie 2015

**Data închidere consultare:** 27 Noiembrie 2015

**Data estimată lansare:** Decembrie 2015 (pe sit MFE), Iunie 2016 (pe sit ANCSI)



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# [http://www.intelcentru.ro/suprachem\\_lab/](http://www.intelcentru.ro/suprachem_lab/)



## SupraChem Lab Laboratory of Supramolecular Chemistry for Adaptive Delivery Systems ERA Chair initiative



Horizon 2020 WIDESPREAD 2-2014: ERA Chairs  
Project no 667387

The strategic objective of the SupraChem Lab Project is to unlock and foster excellent research in PPIMC IntelCentre by setting up a strong research group in the field of hybrid materials for adaptive self-organized supramolecular structures. It is an already stated political demand to support the public or private R&I performers in the convergence regions in exploiting their potential to fully contribute to the development of their country/region and to the overall European research effort. Romania joined this policy through the Sectorial Operational Programmes and the National Research Programmes that stipulate measures to increase the R&I capacity of the country, to stimulate the cooperation between RTD institutions and enterprises, and to increase the access of enterprises to research and innovation. However the participation of Romania in the European Research Area is still low due especial to the lack of experience in research management and marketing.

[Job vacancy](#)

The funding, coming from the EU's research and innovation funding programme, Horizon 2020, has offered the opportunity for excellence institutions from the European converging regions to attract top academics so that they can compete with centres of excellence elsewhere in the European Research Area (ERA). The selected institutions have to award ERA Chairs to outstanding academics who have the capacity to raise standards and attract more high level staff as well as money from other sources, such as EU research funding or regional funds. The SupraChem Lab Proposal project will implement a structural change within in "Petru Poni" Institute of Macromolecular Chemistry - IntelCentre, Iasi, Romania by setting up a competitive research group in the field of supramolecular chemistry.



Funded under Horizon 2020 project - SupraChem Lab - Laboratory of Supramolecular Chemistry for Adaptive Delivery Systems - ERA Chair initiative

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[COLLABORATION](#)

[NEWS](#)



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In numele Echipei de Management a  
Proiectului SupraChem Lab  
Va multumesc pentru atentie !

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Dr. Mariana Pinteala - Coordonator SupraChem Lab

e-mail: [pinteala@icmpp.ro](mailto:pinteala@icmpp.ro)

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