

L'anno duemiladieci, addì **4 maggio 2010** alle ore 15.30, a seguito di regolare convocazione trasmessa con nota prot. n. 24362 del 29 aprile 2010, integrato con successiva nota del 30 aprile 2010 prot. 24627 del punto 11.1, nell'Aula Organi Collegiali, si é riunito il Senato Accademico per l'esame e la discussione degli argomenti iscritti al seguente ordine del giorno:

.....**o m i s s i s** .....

**Sono presenti:** il Rettore, Prof. Luigi Frati, Presidente ed i componenti del Senato Accademico: Prof. Roberto Antonelli, Prof. Prof. Adriano Redler, Prof. Federico Masini, Prof. Mario Caravale, Prof. Elvidio Lupia Palmieri, Prof. Attilio Celant, Prof. Gianluigi Rossi, Prof. Mario Morcellini, Prof. Renato Masiani, Prof. Fabrizio Vestroni, Prof. Vincenzo Nesi, Prof. Fabrizio Orlandi, Prof.ssa Marina Righetti, Prof. Giuseppe Santoro Passarelli, Prof. Stefano Biagioni, Prof. Marcello Scalzo, Prof. Francesco Quaglia, Prof. Pierluigi Valenza, Prof. Andrea Magrì, Prof. Davide Antonio Ragozzino, Prof. Alfredo Antonaci, Prof. Felice Cerreto, Prof. Giorgio Piras, Prof. Fabio Giglioni, Prof. Massimo Realacci, Prof. Enrico Fiori, Prof.ssa Adelina Maria Teresa Borruto, Sig. Beniamino Altezza, Sig. Alessandro Delli Poggi, Sig. Fabrizio Fioravanti, Sig. Fabrizio Trinchieri, Sig. Giuseppe Rodà, Sig. Paolo Piccini, Sig. Giuseppe Alessio Messano, il Dott. Francesco Mellace e l'Arch. Barberio, il Direttore Amministrativo Carlo Musto D'Amore che assume le funzioni di Segretario.

**Assistono i Presidi, i Proff.ri e i Prorettori:** Prof. Francesco Avallone Pro-Rettore Vicario, Roberto Nicolai, Franco Piperno, Marta Fattori, Maria D'Alessio, Luciano Zani, Paolo Lampariello, Filippo Sabetta, Filippo Graziani, Attilio De Luca, Mario Docci, Fulco Lanchester, Bartolomeo Azzaro e Antonello Biagini.

**Assenti giustificati:** Prof. Gian Vittorio Caprara, Prof.ssa Gabriella Salinetti, Prof. Guido Valesini e Sig. Pasquale De Lorenzo.

**Assenti:** Prof. Guido Martinelli, Prof. Roberto Palumbo, Prof. Vincenzo Ziparo, Prof. Franco Chimenti e Sig. Livio Orsini.

**Il Rettore, constatata l'esistenza del numero legale, dichiara l'adunanza validamente costituita ed apre la seduta.**

.....**o m i s s i s** .....



- 4 MAG. 2010

REPARTIZIONE IX  
RELAZIONI INTERNAZIONALI

## ACCORDO PER LA CREAZIONE DI GDRE (GRUPPO DI RICERCA EUROPEO) NEL SETTORE DELLE NEUROSCIENZE.

Il Presidente sottopone all'esame del Senato Accademico la seguente relazione predisposta dalla Ripartizione IX – Relazioni Internazionali, acquisito il parere favorevole dell'Ufficio Valorizzazione Ricerca Scientifica, al fine di valutare la partecipazione di Sapienza, tramite il Dipartimento di Fisiologia e Farmacologia, ad un Gruppo di Ricerca Europeo (GDRE) dal titolo "EPMD" ("Study of mechanisms underlying the early programming of modern diseases").

Il gruppo di ricerca europeo EPMD si configura quale struttura cooperativa, senza personalità giuridica, e ne sono partner:

- Centre National de la Recherche Scientifique (CNRS) ;
- Université des sciences et technologies de Lille (Lille1) ;
- Institut National de la Santé et de la Recherche Médicale (INSERM) ;
- Université Droit et Santé (Lille 2) ;
- Consiglio Nazionale delle Ricerche (CNR) ;
- Sapienza Università di Roma;
- Università Cattolica del Sacro Cuore.

La finalità del gruppo di ricerca europeo EPMD è quella di creare un network tra i laboratori di ricerca dei suddetti partner al fine di garantire supporto e coordinamento allo scambio di esperienze e competenze, nel settore nelle neuroscienze.

Le attività del gruppo, previste nell'accordo, sono le seguenti:

- 1) facilitare ed incoraggiare i contatti e gli scambi tra i ricercatori delle parti;
- 2) coordinare ed assistere le parti nella partecipazione ai programmi che finanziano le attività di ricerca, sia nazionali che internazionali;
- 3) promuovere seminari e conferenze nel settore delle neuroscienze;
- 4) favorire lo sviluppo della collaborazione tra i ricercatori delle parti.

Il Presidente informa il Senato Accademico che il gruppo di ricerca europeo EPMD nasce anche al fine di formalizzare una serie di collaborazioni già in essere tra le parti, sulla base di accordi pregressi.





Senato  
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RIPARTIZIONE IX  
RELAZIONI INTERNAZIONALI

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Già dal 2007, infatti, vi sono strette collaborazioni tra l'Università di Lille 1 ed il CNR di Roma e tra l'Università di Lille 1 e la Sapienza.

Da queste collaborazioni sono poi scaturiti accordi finalizzati allo scambio di professori visitatori tra Francia e Italia, nonché all'organizzazione di una Summer School che ha portato alla mobilità di studenti, dottorandi e post-doc.

Ulteriori supporti finanziari alla Summer School sono stati ottenuti dalla FENS (Federation of European Neurosciences Societies) e, nel 2008, è stato anche organizzato un meeting della durata di due giorni sulla programmazione epigenetica a Lille.

Pertanto, il gruppo di ricerca europeo EPMD, al fine di consolidare la rete internazionale costituitasi a seguito della collaborazione sul tema dell'innovazione nell'epigenetica nelle neuroscienze, si costituirà formalmente a seguito della sottoscrizione dell'accordo da parte di tutti i partner, pur se in esso è prevista la decorrenza dal 1 luglio 2009 al 31 dicembre 2012, al fine di garantire la continuità nelle attività in corso.

Per la Sapienza il Dipartimento direttamente coinvolto nelle attività del gruppo di ricerca europeo EPMD è quello di Fisiologia e Farmacologia diretto dal prof. Paolo Nencini.

I membri del team di ricerca sono i docenti proponenti l'accordo, ossia, i proff. F. Nicoletti, A. Catalani ed S. Gaetani nonché due studenti di dottorato A. Zueno e V. Silletti.

La partecipazione di Sapienza al gruppo di ricerca europeo EPMD comporta un onere finanziario pari ad euro 5.000,00/per anno, secondo quanto indicato nell'annex 4 all'accordo allegato parte integrante.

La copertura finanziaria è garantita dal Dipartimento di Fisiologia e Farmacologia, secondo quanto deliberato dal Consiglio di Dipartimento nella seduta del 12 giugno 2009 (verbale num. 5), allegato parte integrante.

Tutto ciò premesso, il Senato Accademico è chiamato ad autorizzare il Rettore alla firma dell'accordo.

#### Allegati parte integrante:

Agreement to create a European Research Network (GDRE);  
Delibera num. 5 del Consiglio di Dipartimento di Fisiologia e Farmacologia del 12.6.2009.





Senato  
Accademico

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**Il Presidente pone in votazione la proposta di delibera.**

**IL SENATO ACCADEMICO**

- VISTA** la proposta di accordo per la costituzione di un Gruppo di Ricerca Europeo (GDRE) nel settore delle neuroscienze;
- ACQUISITO** il parere favorevole dell'Ufficio Valorizzazione Ricerca Scientifica;
- VISTA** la delibera del Consiglio di Dipartimento di Fisiologia e Farmacologia del 12 giugno 2009, - verbale num. 5;
- ACCERTATA** la copertura finanziaria da parte del Dipartimento di Fisiologia e Farmacologia;
- LETTA** la relazione predisposta dalla Ripartizione IX Relazioni internazionali;

**Con voto unanime**

**DELIBERA**

di autorizzare il Rettore alla firma dell'accordo finalizzato alla partecipazione di Sapienza al gruppo di ricerca europeo EPMD nel settore delle neuroscienze.

**Letto ed approvato seduta stante per la sola parte dispositiva.**

**IL SEGRETARIO**  
Carlo Musto D'Amore

**IL PRESIDENTE**  
Luigi Frati

**AGREEMENT TO CREATE  
A EUROPEAN RESEARCH NETWORK  
(GDRE)**

**«*STUDY OF MECHANISMS UNDERLYING THE EARLY PROGRAMMING OF  
MODERN DISEASES (EPMD)*»**

**Centre National de la Recherche Scientifique**, hereinafter referred to as **CNRS**, a public scientific and technological institution headquartered 3, rue Michel Ange, 75794 Paris Cedex 16 - France, represented by its President, Prof. Alain FUCHS,

acting in its own name and on behalf of:

- Unité de glycobiochimie structurale et fonctionnelle, UMR 8576 (CNRS, Université Lille 1), directed by Dr Jean-Claude MICHALSKI,
- Laboratoire mouvement adaptation cognition, UMR 5227 (CNRS, Université Bordeaux 2, Université Bordeaux 1), directed by Dr Jean-René CAZALET,
- Institut de biologie du développement de Marseille Luminy (IBDML), UMR 6216 (CNRS, Université Aix-Marseille 2), directed by Dr Geneviève ROUGON,
- Institut des neurosciences cellulaires et intégratives (INCI), UPR 3212, directed by Dr Marie-France BADER,
- Institut de recherche interdisciplinaire (IRI), USR 3078 (CNRS, Université Lille 1, Université Lille 2), directed by Mr Jean-Benoist DUBURCQ.

And

**Université des sciences et technologies de Lille**, hereinafter referred to as **Lille 1**, a public institution of higher education and research, headquartered Cité Scientifique 59655 Villeneuve d'Ascq Cedex - France, represented by its President, Prof. Philippe ROLLET,

acting in its own name and on behalf of:

- Unité de glycobiochimie structurale et fonctionnelle, UMR 8576 (CNRS, Université Lille 1), directed by Dr Jean-Claude MICHALSKI,
- Institut de recherche interdisciplinaire (IRI), USR 3078 (CNRS, Université Lille 1, Université Lille 2), directed by Mr Jean-Benoist DUBURCQ.

And

**Institut National de la Santé et de la Recherche Médicale**, hereinafter referred to as **INSERM**, a public institution of human health research, headquartered 101 rue de Tolbiac 75654 Paris Cedex 13 - France, represented by its Chairman and Chief executive Officer, Prof. André SYROTA,

acting in its own name and on behalf of:

- Equipe Unité Development and Plasticity of the Postnatal Brain headed by Dr Vincent PREVOT - Centre de Recherche Jean-Pierre Aubert (JPARC), U 837 (INSERM, Université Lille 2), directed by Dr Pierre FORMSTESCHER.

And

**Université Droit et Santé - Lille 2**, hereinafter referred to as **Lille 2**, a public institution of higher education and research, headquartered 42, rue Paul Duez, 59000 Lille - France, represented by its President, Christian SERGHERAERT,

acting in its own name and on behalf of:

- Equipe Development and Plasticity of the Postnatal Brain headed by Dr Vincent PREVOT - Centre de Recherche Jean-Pierre Aubert (JPARC), U 837 (INSERM, Université Lille 2), directed by Dr Pierre FORMSTESCHER ,
- Institut de recherche interdisciplinaire (IRI), USR 3078 (CNRS, Université Lille 1, Université Lille 2), directed by Mr Jean-Benoist DUBURCQ.

And

The **Consiglio Nazionale delle Ricerche**, hereinafter referred to as **CNR**, a public scientific and technological institution, headquartered 7, Piazzale Aldo Moro, 00185 Roma - Italy, represented by its President, Prof. Luciano MAIANI,

acting in its own name and on behalf of:

- Institute of Neuroscience of Rome (IN-CNR), directed by Prof. Tullio POZZAN.

And

The **Sapienza Università di Roma**, hereinafter referred to as **Sapienza**, a public institution of academic education and research, headquartered 5, Piazzale Aldo Moro 00185 Roma - Italy, represented by its President, Prof. Luigi FRATTI,

Acting in its own name and on behalf of:

- Department of Physiology and Pharmacology “V. Erspamer”, directed by Prof. Paolo NENCINI.

And

The **Università Cattolica del Sacro Cuore**, hereinafter referred to as **Cattolica**, a public institution of academic education and research, headquartered largo Gemelli, 1 – 20123 Milano- Italy, represented by its President, Prof. Lorenzo ORNAGHI,

acting in its own name and on behalf of:

- Neuroscience Department, directed by Prof. Pietro Attilio TONALI.
- Institute of Pharmacology, directed by Prof. Carlo PATRONO.

Hereafter referred to as collectively « the Parties » and individually “the Party”.

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**IN ACKNOWLEDGEMENT OF**

- The Cultural agreement between French and Italian governments signed on the 4<sup>th</sup> of November 1949;
- The Scientific agreement of cooperation between the government of the French Republic and the government of the Italian Republic signed on the 29<sup>th</sup> of January 2001;
- The cultural and scientific frame agreement on the bilateral collaboration between the University of Lille 1 and the Sapienza signed on the 15<sup>th</sup> February 2007;
- The cooperation agreement between CNRS and CNR signed in Rome on the 7<sup>th</sup> November 2007;
- The four-year agreement between CNRS and Lille 1;
- The four-year agreement between CNRS and Lille 2;
- The four-year agreement between CNRS and Bordeaux 2;
- The four-year agreement between CNRS and Bordeaux 1;
- The four-year agreement between CNRS and Aix-Marseille 2;
- The four year agreement between INSERM and Lille 2;
- The power of attorney conferred on the CNRS to sign the present Agreement on behalf of University of Bordeaux 2, University of Bordeaux 1 and University of Aix-Marseille 2.

**PREAMBLE**

The scientific collaboration on neurosciences between France and Italy started several years ago. In particular, the collaboration between the laboratory of Pharmacology at Sapienza University of Rome and French research teams from Bordeaux started in October 1988.

Several grants for mobility were obtained in the framework of several national and international programs such as the Partenariat Hubert Curien (PHC) Galileo and the ERASMUS program, short fellowship from the European Union and private grants from industries. Several PhD students took their PhD and Italian students became Researchers or Professors in France, such as Stefania Maccari herself, who became first Assistant Professor at the University of Bordeaux 2 and after Professor at the University of Lille 1.

A new collaboration was created between Lille and the Institute of Neurosciences in Rome (CNR). A frame agreement was also signed between University of Lille 1 and the Sapienza University of Rome in 2007. This agreement permitted the nomination of French researchers as Visiting Professors at the Sapienza University of Rome and in return the nomination of Italian researchers as Visiting Professors at the University of Lille 1. Furthermore, mobility of PhD students and Postdocs was improved thanks to this agreement which supported the annual summer schools of neurosciences organised by S Maccari.

A financial support for the summer schools was obtained from the Federation of European Neurosciences Societies (FENS). In 2008, a two-day meeting on “Programming and Epigenetic” was organized in Lille, funded by the French Neurosciences Society.

The aim of the GDRE “The early programming of modern diseases” (EPMD) is to consolidate the international network around the epigenetic, an innovative theme of neurosciences. This consortium groups high level researchers, internationally recognized in different neuroscience fields: prenatal stress animal model (Stefania Maccari’s team) of depression (Ferdinando Nicoletti’s and Assia Catalani’s teams) and antidepressant action on plasticity (Annie Daszuta’s team); eating (Anna Moles’, Vincent Prévot’s and Silvana Gaetani’s team) and circadian disorders (Paul Pevet’s team); parkinsonism (Christian Gross’ team), proteomics (Jean-Claude Michalski’s team) and epigenetics (Arndt Benecke’s team).

## **IT HAS BEEN AGREED AS FOLLOWS:**

### **PRELIMINARY ARTICLE – DEFINITIONS**

- “Proprietary results”: Knowledge and/or Data which may or may not be protected by intellectual property rights and belonging to one of the Parties, obtained prior to joining the present Agreement or simultaneous to and independent of the scope of GDRE activities, or as direct or indirect results of the GDRE activity and necessary to carrying out purposes of this Agreement
- “Joint Results”: Knowledge and/or Data which may or may not be protected by intellectual property rights to which two or more Parties jointly contributed in a substantial or inventive manner and which are a direct or indirect (e.g. research collaboration) result of the GDRE activities. Such results are subject to the terms of Article 6.4 and Annex 5.
- “Qualified Know-How”: All practical results unprotected by intellectual property rights which are :  
(a) confidential, (b) substantial, i.e. significant and useful for the manufacture of particular products and (c) identified, i.e. described in such a way as to be understandable and adequate to confirm the elements of (a) and (b).

## ARTICLE 1 - CREATION AND TERM

A European Research Network (“Groupement de Recherche Européen”, in French), a cooperative structure devoid of legal status, entitled “**Study of mechanisms underlying the early programming of modern diseases**” abbreviated as “**EPMD**”, and working in the field of Neurosciences, hereinafter referred to as “GDRE EPMD” or “GDRE”, is formed between the Parties at the date of signature of the present Agreement, with effect from the 1<sup>st</sup> July 2009 until the 31<sup>st</sup> December 2012.

The Agreement creating this GDRE may be renewed once by amendment.

Any decision to renew shall be taken by the Parties following consultation with the Steering Committee and the Scientific Management Committee of the GDRE.

## ARTICLE 2 - PURPOSE

The purpose of the GDRE “EPMD” is to provide support and coordination for scientific exchanges and activities related to the scientific programme described in Annex 1 hereto.

For this purpose, the GDRE “EPMD” undertakes to:

- facilitate and encourage contacts and exchanges between Parties’ researchers,
- encourage the development of cooperation within the scientific community it encompassed or with third parties,
- promote consistency and compatibility in conference programming on its scientific project,
- develop training actions for its scientific project,
- coordinate and assist its Members in developing multipartner programs responding to calls for proposals in national, European and international funding programs for research and technological development or scientific coordination activity.

## ARTICLE 3 – COMPOSITION

The GDRE “EPMD” is composed of the Parties’ research units (hereinafter referred to as “Members”) set forth in Annex 2.A “Composition of the GDRE” hereto, incorporated by reference herein.

This Annex shall be updated as per the terms set forth in Art. 7.1, in order to take into account the admission of all new members or the withdrawal or exclusion of a Member of the GDRE “EPMD”.

Personnel contributing to the work of the GDRE shall remain assigned to laboratories belonging to the Parties by which they are employed. Each Party shall continue to be responsible with respect to its personnel for the financial contributions and obligations it has as an employer.

The list of said personnel as of the date when the GDRE was created is set out in Annex 2.A.

## **ARTICLE 4 – ORGANIZATION**

### **4.1. – Co-coordinators**

The GDRE “EPMD” has two coordinators, one per country, whose identities are given in Annex 3 hereto (hereinafter the “Co-coordinators”), jointly appointed by the Parties for a (4) four-year period .

The GDRE Co-coordinators shall:

- prepare the GDRE scientific project description, together with the Scientific Management Committee;
- prepare the annual GDRE forward budget, together with the Scientific Management Committee;
- prepare the GDRE’s annual scientific and financial reports and submit them to the Parties for approval, and to the Steering Committee, after approval by the Scientific Management Committee;
- work together with the Scientific Management Committee as necessary to draft responses to calls for proposals from national, European or international funding programs for scientific coordination activities

After having consulted the Scientific Management Committee, the Co-coordinators may accept the participation to GDRE activities of external scientific experts whose contribution is deemed useful to the GDRE, subject to the terms of Article 6.2.

### **4.2. - Scientific Management Committee**

The GDRE Scientific Management Committee shall be composed of representatives of the laboratories participating in the GDRE, limited to a single representative per laboratory, the list of which is found in Annex 2.B.

The Scientific Management Committee shall be chaired by the GDRE Co-coordinators.

The Scientific Management Committee shall:



- progress report of the work carried out by the GDRE,
- evaluate the human and budgetary needs to run the GDRE and, as necessary, determine the sharing out of external resources to assist in financing those needs,
- approve the provisional budget, annual scientific and financial reports prior to their distribution to the Parties and Steering Committee,
- propose the admission of new members or the exclusion of GDRE Members.

The Co-coordinators may consult the Scientific Management Committee on any question relative to the GDRE.

The Scientific Management Committee shall meet at least once a year and as often as needed at the initiative of the Co-coordinators or a third of its members. As necessary and with the unanimous consent of the Scientific Management Committee members, these meetings may be held by videoconferencing, or by any other means. Meeting minutes shall be taken for all Scientific Management Committee meetings. All minutes shall be distributed to the Parties.

The Scientific Management Committee shall take decisions based on the vote of a majority of its members present or represented, the quorum being a minimum of three quarters (3/4) of the GDRE Members.

#### **4.3. – Steering Committee**

A Steering Committee shall be established for the GDRE. This committee shall include two representatives per country, chosen from outside the staff of the GDRE laboratories, the list of which is included in Annex 2.C.

The Steering Committee for the GDRE is constituted of:

- 2 representatives of the French Parties:
  - the Scientific Director of the CNRS Biology Sciences Institute, or his/her representative,
  - one representative of French Universities,
- 2 representatives of the Italian Parties:
  - the Director of the CNR Life Science department, or his/her representative,
  - the President of Sapienza, or his/her representative

The Steering Committee is chaired by one of its members (hereinafter “The Chairperson”), elected by his or her peers for a two-year period.

The GDRE Co-coordinators shall attend the Steering Committee meetings in an advisory capacity.

The GDRE Steering Committee's responsibilities include:

- advising on the management of GDRE resources, its progress, the setting up of its initial orientations and its scientific project description prepared by the Coordinator, as well as proposing new orientations, as needed;
- adopting the GDRE budget, approving annual scientific and financial reports;
- deciding to admit new members or Parties to the GDRE following consultation with the Co-coordinators and GDRE Scientific Management Committee; formal admission is granted pursuant to Art 7.1;
- deciding to exclude a GDRE Member (team, laboratory or Party) pursuant to Article 7.2;
- proposing any modification to the present Agreement, to be formalized in an amendment signed by all Parties;
- advising on the renewal of the GDRE by taking into consideration the evaluation provided pursuant to Art 4.4 ;
- reaching decisions on all other matters concerning the GDRE.

The Steering Committee shall meet at least once every two (2) years at its Chairperson's request or at the request of one quarter of its members, specifically in order to decide on the admission or exclusion of a member into/from the GDRE. As necessary and with the unanimous consent of the Scientific Management Committee members, these meetings may be held by videoconferencing, or by any other means.

It may invite any expert whose presence is deemed useful, in an advisory capacity, to attend its meetings, subject to the execution of a nondisclosure agreement by said expert.

Subject to Articles 7.1 and 7.2, the Steering Committee shall make decisions based on the vote of a majority of its members present or represented, with a quorum of a minimum of three quarters (3/4) of its members.

Meeting minutes shall be taken for all Steering Committee meetings.

All minutes shall be provided to the Parties.

Subject to Article 7.2, for any decision bearing on the financial contribution and intellectual property rights of a Party, the latter may exercise its right of veto within one month of receipt of the meeting minutes.

#### **4.4. – Evaluation**

The GDRE activity shall be assessed regularly and in any event before its expiration date by the relevant authorities of the Parties, in accordance with the applicable procedures of these bodies.

The Parties may also propose to form an ad hoc committee, particularly prior to GDRE renewal, in order to evaluate its scientific activity and issue recommendations on the GDRE scientific orientation and functioning.

Evaluation reports shall be addressed to the Steering Committee.

## **ARTICLE 5 – FUNDING PROVISIONS**

Each Party shall inform the GDRE Co-coordinators, prior to the start of each calendar year, of the projected amount of funds which it shall allocate directly to its laboratories or teams participating in the GDRE, and/or which it shall allocate to the Co-coordinators for purposes of meeting the GDRE's objectives. The GDRE laboratories shall also inform the Co-coordinators of any funds originating from other sources which are available to the GDRE in fulfilling its objectives.

Annex 4 provides a breakdown of the (projected) budget allocated to the GDRE for the first year in which the agreement shall enter into effect.

Each of the Parties shall manage the funding it allocates to the GDRE according to its own rules. It may also choose to assign the management of all or a part of such funding to CNRS.

If necessary, on behalf of the laboratories or teams which make up the GDRE, the GDRE Co-coordinators shall prepare requests for specific resources to be submitted to potential sources of funds. Generally speaking, where funding is obtained, such funds are shared out among the Parties on a pro rata basis, commensurate with their participation in the project funded.

For purposes of establishing the GDRE annual financial statement or activity reports required by potential funding sources, a statement of expenditures in the framework of the GDRE shall be sent by the participating laboratories or teams to the Co-coordinators at the end of every calendar year.

## ARTICLE. 6. – PUBLICATION, NONDISCLOSURE, INTELLECTUAL PROPERTY RIGHTS

### 6.1. – Publications

Publications resulting from scientific work carried out in connection with the GDRE shall indicate the link with the GDRE Parties and bear a statement acknowledging **the support of the “GDRE Early Programming of Modern Diseases (EPDM)”**.

The publication of scientific results shall be made as per the usual custom and practice of the scientific community, with the prior consent of all participants having contributed to the Results, and of the entitled Parties.

Throughout the term of the present agreement and for a subsequent period of eighteen (18) months, all Members undertake to notify the GDRE Co-coordinators of any research to be published within the research programme of the GDRE and to distribute it to the Members prior to publication.

### 6.2. – Nondisclosure

Throughout the term of the present agreement and for a subsequent period of five (5) years, unless expressly agreed otherwise in writing by the owner Party, the Parties undertake to limit to the purposes of the GDRE the use of any information gained thanks to the present Agreement, and specifically to refrain from disclosing to third parties, reserving rights over, or industrially or commercially exploiting such information. This provision specifically applies to Proprietary Results belonging to another Party which were identified as confidential, except for that information:

- which is in the public domain or which enters the public domain through a source other than the Party receiving the information;
- which is already in the possession of the receiving Party when communicated;
- which is communicated to the receiving Party by a third party who is under no duty to maintain confidentiality.

For such a purpose, the Parties undertake to ensure compliance with these provisions by all participants in the GDRE scientific work, including all external scientific experts and the organization they belong to, from whom the Co-coordinators shall obtain, prior to disclosure, a signed confidentiality agreement at least as restrictive as the terms herein.



### **6.3. – Exchange of information about Proprietary and Joint Results**

The Parties shall mutually communicate to each other the Proprietary and Joint Results necessary to perform their duties under the present Agreement, subject to the terms of Article 6.2 regarding confidentiality. The Parties acknowledge that Proprietary and Joint Results shall remain the property of the owning-Party.

### **6.4. – Intellectual property and use principles applied to Joint Results**

The Parties acknowledge that the GDRE activities focus on the coordination of scientific exchanges rather than carrying out research, in accordance with Article 2.

However, in the event that GDRE activities lead to Joint Results which may be protected as intellectual property or Joint Qualified Know-How, or a research collaboration project between certain Parties, or even with a third party, the Parties concerned shall undertake to contractually define amongst themselves the terms which shall apply to the sharing and management of the ownership of Joint Results, as well as their exploitation.

In the absence of an agreement between the Parties concerned, such rules shall be determined by reference to the principles set out in Annex 5.

## **ARTICLE 7 – MISCELLANEOUS PROVISIONS**

### **7.1. – Membership**

All additions of members to the GDRE, including that of a new laboratory of one of the Parties, require the unanimous consent of the Steering Committee.

Any admission of a new laboratory under the authority of a Party requires the update of Annexes 2 and 4, to be provided by the Co-coordinators to all Parties.

The addition of new parties to the GDRE shall require an amendment to this Agreement.

All admission amendments to this Agreement shall be signed by the new member(s) and CNRS, authorized by this Agreement to so act on behalf of the other Parties.

The sole purpose of an admission amendment is to join new Parties to the GDRE. It in no way modifies the scope of the present Agreement.

The CNRS will send to each Party a copy of said amendment, after signature.

## **7.2. – Withdrawal - Exclusion**

One or more Members or Party making up the GDRE may withdraw upon request, provided that a (6) six-month prior notice is given to the Parties.

In the event of insufficient participation in reaching the objectives of the GDRE or negligent failure to perform a Party's duties, the GDRE Steering Committee may decide to exclude one or more laboratories, after consultation with the Scientific Management Committee.

Such a decision requires the unanimous vote of the Steering Committee members present, while the representative(s) of the Party(ies) affected by the potential exclusion shall not participate in the vote. At least three quarters of the Steering Committee member representatives must vote.

Notwithstanding the withdrawal or exclusion of a Party, Articles 6.1., 6.2. and 6.4. concerning publication, confidentiality, intellectual property rights and use shall remain in force for their respective time periods.

Any withdrawal or exclusion shall be formalized by an update of Annexes 2 and 4, provided by the Co-coordinators to all Parties.

## **ARTICLE 8 - CANCELLATION**

This agreement may, for exceptional and justifiable reasons, be cancelled before the term defined in Article 1 has expired, upon a (6) six-month prior notice. In such a case, the Parties shall undertake to complete pending joint activities.

The decision to cancel shall be taken by the Parties, following consultation with the Steering and Scientific Management Committees.

## **ARTICLE 9 -DISPUTES**

In the event of difficulties related to the interpretation or performance of this Agreement, the Parties shall endeavor to settle their dispute out of court, notably within the Steering Committee.

If no agreement can be reached within the Steering Committee within sixty (60) calendar days from notification date of the dispute by the most diligent Party, the Parties undertake to submit it to mediators, one of whom will be appointed by each Party, unless they can agree on a single mediator. The said mediator(s) will do their best to settle any difficulties and find an amicable solution acceptable to both Parties within sixty (60) calendar days from the date on which the mediator or mediators were appointed.

If no agreement can be reached, the dispute will be taken before the competent Court.

Done in 7 (seven) original copies.

Done at Paris, on

For CNRS

For Consiglio Nazionale delle Ricerche

President

Alain Fuchs

President

Luciano Maiani

For Université Lille 1

For Università Sapienza di Roma

President

Philippe Rollet

President

Luigi Frati

For Université Lille 2

For Università Cattolica del Sacro Cuore

President

Christian Sergheraert

President

Lorenzo Ornaghi

For INSERM

Chairman and CEO

André Syrota

## ANNEX 1

### RESEARCH PROGRAMME

#### Study of mechanisms underlying the early programming of modern diseases (EPMD)

The activity of non-genetic factors early in life that results in the permanent organization or imprinting of physiological systems is known as perinatal “programming”. These epigenetic insights offer new therapeutic avenues for exploration. Epigenetics also provides a means by which genetic material can respond to changing environmental conditions. The environment can thus prompt epigenetic changes that affect future generations. Stressors occurring during critical periods of development such as perinatal life may thus play on those epigenetic mechanisms, changing the phenotype of an individual. Epigenetic gene regulation through DNA methylation and histone modifications has been shown to be a crucial mechanism for the development and function of the nervous system, ranging from cell differentiation to neuronal plasticity, from learning and memory to behaviour. Consequently, the deregulation of the epigenome could be associated with various neuropsychiatric disorders. In conclusion, the GDRE scientific main goal is to promote the study of mechanisms underlying the early programming of modern diseases (EPMD) with special reference to eating and weight disorders, drug addiction, sleep and other chronobiological disorders, depression and neurodegenerative disorders.

The causal risk factors and pathways leading to common modern clinical problems, such as obesity and cardiovascular disease, schizophrenia and depression remain largely unknown. There is consistent evidence demonstrating that inherited, genetic factors play an important role in such disorders. Although genetic factors are of major importance, epidemiological studies show that the rates of many disorders such as diabetes, obesity and depression have changed over time and vary geographically to an extent that is incompatible with the effects of genetic differences.

Early environmental triggers or stressors may have a permanent rather than a transient effect on the organism. In fact, the activity of non-genetic factors early in life that result in the permanent organization or imprinting of physiological systems is known as perinatal “programming” (Barker, 1999). For instance, under extreme conditions like stress and/or undernutrition, which induce reduced birthweight, the offspring of stressed mothers display short- and long-term physiological and behavioral abnormalities (Goland et al., 1993). In humans, intrauterine growth retardation and low birth-weight are considered indexes of prenatal stress, and these intriguing findings have spawned the ‘fetal origin’ hypothesis of adult cardiovascular disease, and more recently, metabolic syndrome (Barker, 1995).

Developmental programming is a key area of research for the health of the national population. Understanding developmental programming will enable provision of better antenatal advice and care to improve the health of future generations. Knowledge of the mechanisms of developmental programming will allow physicians to develop treatments that are best suited to each newborn and adult patient. Making treatment specific to the pregnancy and/or the phenotype of the newborn child will lead to better management and prevention of the complications of diabetes, obesity, and other chronic, debilitating, and economically important modern diseases.



The study of animal models is needed to answer the key questions relating to exposures, mechanisms, and outcomes of developmental programming. It is necessary to integrate whole animal systems physiology, in vitro cellular biology, and genomic and proteomic approaches, and to use animal models that are appropriate for the questions under study.

The collaborative project started in 2001 and focused on potential effects of prenatal stressful events on later susceptibility to disease. In rats, perinatal stresses can have different long-term behavioral and neuroendocrine consequences. We have investigated the involvement of changes in the activity of the HPA axis in the long-term effects of prenatal restraint stress (PRS) and/or postnatal stress from birth to old age. Repeated restraint during the last 11 days of pregnancy was used as a PRS, and adoption at birth was used to change the postnatal environment. We found that (1) PRS prolongs stress-induced corticosterone secretion in adult rats, which was attributed to the observed decrease in central corticosteroid receptors; (2) adoption, irrespective of the stress experience of the foster mother, reverses the effects of PRS; and (3) adoption per se increases maternal behavior and decreases the stress-induced corticosterone secretion peak in adult offspring (Maccari et al., 1995).

From a behavioral point of view, adult PRS rats also showed increased anxiety, depression like-behaviors and cognitive deficits. In particular, PRS rats showed increased emotionality (Poltyrev et al., 1996; Vallée et al., 1997; Morley-Fletcher et al., 2003a; 2004a; Viltart et al., 2006), REM sleep (Dugovic et al., 1999), vulnerability to drugs (Déminièrre et al., 1992; Henry et al., 1995; Koehl et al., 2000; Morley-Fletcher et al., 2004b; Kippin et al., 2007) and altered food-intake (Valleè et al., 1996; Lesage et al., 2004). More recently, it has been shown that other important physiological functions such as growth and metabolism are influenced by PRS. Indeed, maternal stress is known to disturb the fetal glucocorticoid environment, and we have observed that, in fetuses at term, maternal stress reduces body, adrenal and pancreatic weight as well as plasma corticosterone and glucose levels (Lesage et al., 2004; Mairesse et al., 2007a). The hypothalamus plays a critical role in the regulation of food intake and body weight, and recent work has defined core circuitry in the hypothalamus that appears to mediate many of the effects of the adipocyte-derived hormone leptin on feeding and glucose homeostasis. However, until recently, little was known about the development of these critical pathways. The recent review by Bouret and Simerly (2006) summarizes advances regarding the postnatal development of 'metabolic' projections from the arcuate nucleus of the hypothalamus. Evidence accumulated primarily in mice indicates that these circuits develop after birth and remain both structurally and functionally immature until the second week of life. Recent studies have begun to identify cues governing the development of these pathways, and leptin appears to play a crucial neurotrophic role in the development of the hypothalamic circuits regulating food intake and adiposity. The neurodevelopmental activity of leptin thus appears to be specifically restricted to a neonatal critical period that coincides with the naturally occurring surge in leptin. The timing and amplitude of this postnatal leptin surge has important consequences for normal eating behavior, body weight regulation and glucose homeostasis later in life. Besides the homeostatic regulatory system with its main components in the hypothalamus and brainstem, there is an extensive neural network involved in the control of ingestive behavior, that includes the gustatory, visceral, olfactory, prefrontal and orbitofrontal cortex, the amygdala and the hippocampal complex. This corticolimbic system deals mainly with the cognitive, motivational,

and emotional aspects of ingestive behavior and represents the main interface with environmental factors and stimuli. Leptin can also act at extrahypothalamic sites including the ventral tegmental area (VTA) to modulate brain reward circuitry (Fulton, Neuron, 2006 ; Hommel, Neuron, 2006). Although the birth and migration of DA neurons in the VTA and substantia nigra (SNc) is mostly completed by the second half of the gestational period in rodents (McArthur, 2005), the development of the dopaminergic innervation from VTA neurons to the striatum and the prefrontal cortex is an active process that continues well past the third week of postnatal life in rodents (Antonopoulos, Neuroscience, 2002).

PRS effects have been observed long term after the early exposure to stress until aging. During aging, PRS induces learning and memory impairments (Vallée et al., 1999; Darnaudery et al., 2007). Using a combination of PRS and the pesticide rotenone, a potent mitochondrial complex I inhibitor, in adulthood to generate Parkinson's disease-like symptoms in the offspring, we have found that fine motor behavior is altered in PRS-Rotenone rats (Mailliot-Van Besien et al., 2005), showing that PRS also increase vulnerability to neurodegeneration diseases.

The perinatal period appears to be critical for fiber development and synapse formation in brain regions involved in food reward, addiction and neurodegeneration diseases since, for instance, in the nucleus accumbens, the total density of DA synapses peaks between postnatal days 7 and 14 and decreases thereafter. Moreover, compelling evidence from animal models has shown that a range of environmental factors occurring during the perinatal period can either directly cause a reduction in the number of dopamine neurons, or cause an increased susceptibility to degeneration of these neurons with subsequent environmental insults or with aging. Such events could play a role in Parkinson's disease which is a chronically progressive neurodegenerative disorder characterised by motor alteration and a massive loss of dopamine cells in the substantia nigra *pars compacta* (Barlow et al., 2007). Another brain structure of interest is the hippocampus, which is involved in the response to stress and in memory performance (Lupien and Lepage, 2001), and is the key brain target of PRS. Indeed, concomitant with a dysfunction in the feedback inhibition of the HPA axis, we have shown higher hippocampal Fos protein expression under basal conditions and a blunted Fos protein response after exposure to stress in male PRS rats (Viltart et al., 2006, Mairesse et al., 2007). These results, together with previous data showing a decrease in hippocampal MR/GR receptors (Maccari et al., 1995, Van Waes et al., 2006), suggest that PRS reduces hippocampal plasticity and decreases the inhibitory effects of the hippocampus on the HPA axis in males. Furthermore, the influence of PRS on neuronal plasticity has been studied in the hippocampus of male rats, where it reduces neurogenesis (Lemaire et al., 2000; Zueva et al., 2008). In order to study biomolecular mechanisms involved, at least in part in reduced neurogenesis we studied proteins involved in neuronal plasticity. We observed, an increased expression of PSA-NCAM (Morley-Fletcher et al., 2008) and BDNF, as well as an increase of Fos protein expression, probably as a compensatory effect of decreased neurogenesis. The alterations in both PSA-NCAM expression and neurogenesis are reversed by chronic antidepressant treatment (Mairesse, Morley-Fletcher et al., submitted). Previously, we have observed a higher sensitivity to classical antidepressant (imipramine and tianeptine) treatment in PRS rats compared to controls (Morley-Fletcher et al., 2003; 2004). PRS rats represent, therefore, an interesting animal model for the evaluation of the efficacy of pharmacotherapeutic interventions in psychiatric disorders (Morley-

Fletcher & Maccari, 2007).

Recently (Maccari et al., 2007, SFN), we have also shown a reduction in the phosphorylation of CREB proteins, transcription factors which bind to DNA sequences called cAMP response elements (CRE) and thereby increase or decrease the transcription of certain genes. Using a proteomic approach, preliminary results obtained by S. Morley-Fletcher in collaboration with JC Michalski of the UMR 8576 CNRS at the University of Lille1 indicate that PRS increases the expression of synaptic proteins and a protein involved in the glutamate synthesis pathway, glutamine synthetase. We have provided evidence that PRS reduces the expression and activity of type-5 (mGlu5) metabotropic glutamate receptors in the hippocampus of male rats. This is relevant because mGlu5 receptors are implicated in the regulation of both synaptic plasticity and neurogenesis, in addition to anxiety (Di Giorgi-Gerevini et al., 2004, 2005), and a recent work also demonstrates that maternal stress affects the expression of Homer proteins, critical to glutamatergic signaling, in the brains of offspring (Ary et al., 2007). In parallel, we have shown that PRS-Rotenone rats, an animal model of Parkinson disease, exhibit a strongly reduced N-acetylglucosaminylation of total protein in the striatum.

Until now, we have largely studied the hippocampus of adult rats. In order to center our project on eating, reward and emotional/cognitive behaviors, proteomic analysis will also be carried out in the hypothalamus and striatum in addition to the hippocampus at different ages. We will pay particular attention to post-translational modifications that regulate the activity and functionality of proteins, and we will focus on glycosylation, which occurs on the majority of brain proteins. Two particular kinds of glycosylation will be considered: fucosylation and O-GlcNAcaminylation. Studies suggest that these modifications represent a key regulatory mechanism in the brain, contributing to transcriptional regulation, neuronal communication and neurodegenerative disease (Murrey et al. 2006; Rexach et al. 2008). Once the identification of proteins has been carried out, epigenetic experiments will follow. First, we will focus on several proteins whose abundance is already known to be impaired starting from our PRS rat model, namely Fos, BDNF, PSA-NCAM, and CREB, and then on those identified by the proteomic approach. We will perform a systematic methylation analysis of the corresponding genes using bisulphite sequencing. In addition, the levels of post-translational histone modifications at different promoter regions of candidate genes in the hippocampus of PRS and control rats will be assayed using chromatin immunoprecipitation (ChIP) studies. The nature of the modifications induced by early events will shed more light on the mechanisms and enzymatic machinery involved in the epigenetic mechanisms related to this process. The description of the epigenetic changes occurring at different gene sequences will also allow us to study the kinetics of the implementation of epigenetic marking. In order to determine the sequence of the epigenetic events triggered by early experiences, PRS will be induced and a number of selected modifications occurring at different target sites will be monitored at different time points. This kind of research approach could contribute to the development of new pharmacological treatments based on the epigenetic and proteomics results obtained.

**The GDRE main goal is to promote the study of mechanisms underlying the early programming of modern diseases (EPMD) with special reference to eating and weight disorders,**

**drug addiction, sleep and other chronobiological disorders, depression and neurodegenerative disorders.** This consortium groups high level researchers, internationally recognized in different neuroscience fields: prenatal stress animal model of depression; eating disorders; parkinsonism, proteomics and epigenetics.

**The GDRE will focus on the following major topics:**

**A. Functional proteomics involved in EPMD**

A glycoproteomic approach will allow focusing on two particular kind of glycosylation as the main post-translational modifications (PTM) occurring in the brain that could be affected by early experiences: fucosylation and O-Glc-NAc glycosylation. Studies suggest that these modifications represent a key regulatory modification in the brain, contributing to transcriptional regulation and neuronal communication. Considering that protein expression and/or glycosylation patterns could be modified by prenatal restraint stress (PRS) in a synergic but also independent manner, in parallel to a protein-derived approach we will perform a protein-based glycoproteomic investigation on several candidate proteins known to be involved in the regulation of the different regulatory process (neuroplasticity, feeding pathways, reward) and modified by PRS and very likely to be affected by early adverse experiences.

Teams: Michalski, Maccari, Gross, Catalani, Daszuta, Cassano

**B. Epigenetic mechanisms involved in EPMD**

DNA methylation patterns at the genes modified by early experiences will be systematically investigated with high throughput methodology and hypothesis based gene preselection. High-throughput method for analyzing the methylation status of hundreds of preselected genes simultaneously that has been already applied to the discovery of methylation signatures that distinguish normal from cancer tissue samples. The assay will be used to obtain a quantitative measure of the methylation level at each CpG site. Moreover, the nature of the modifications induced during early developmental stages will shed light on the mechanisms and enzymatic machineries involved in the epigenetic mechanisms involved in the process

Teams: Maccari, Bouret, Moles, Benecke

**C. Neurobiological and behavioural outcomes of from birth to old age.**

One of the aim of our consortium is to understand how perinatal environment influences development and function of neural networks controlling different behavioural systems. Neural networks necessary for many instinctive behaviors and physiological functions are formed primarily during the perinatal period under the influence of what appear to be activity independent developmental mechanisms. When an individual is confronted with environmental conditions that differ markedly from those present during perinatal development, however, disorders can ensue. This research promises to provide new insight into the mechanisms by which alterations in the perinatal environment during critical periods of fetal and early

post-natal development permanently alter development of brain and may result in an increased risk of diseases.

The evaluation of behavioral effects is also an important goal for the GDRE. Screening of general health and neurophysiological functions as well as specific hypothesis guided testing in the behavioral domains of circadian rhythms, drug self administration, food intake and metabolic phenotype, social behaviour, learning and memory and assessment of psychiatric-like conditions, will be undertaken to assess the effects of different environmental exposures on relevant behavioural profiles at significant developmental points across the life span.

Teams: Bouret, Maccari, Gross, Catalani, Moles, Daszuta, Layé, Van Reeth, Navarra, Pevet

#### D. Epigenetics and proteomics in the drug development pipeline

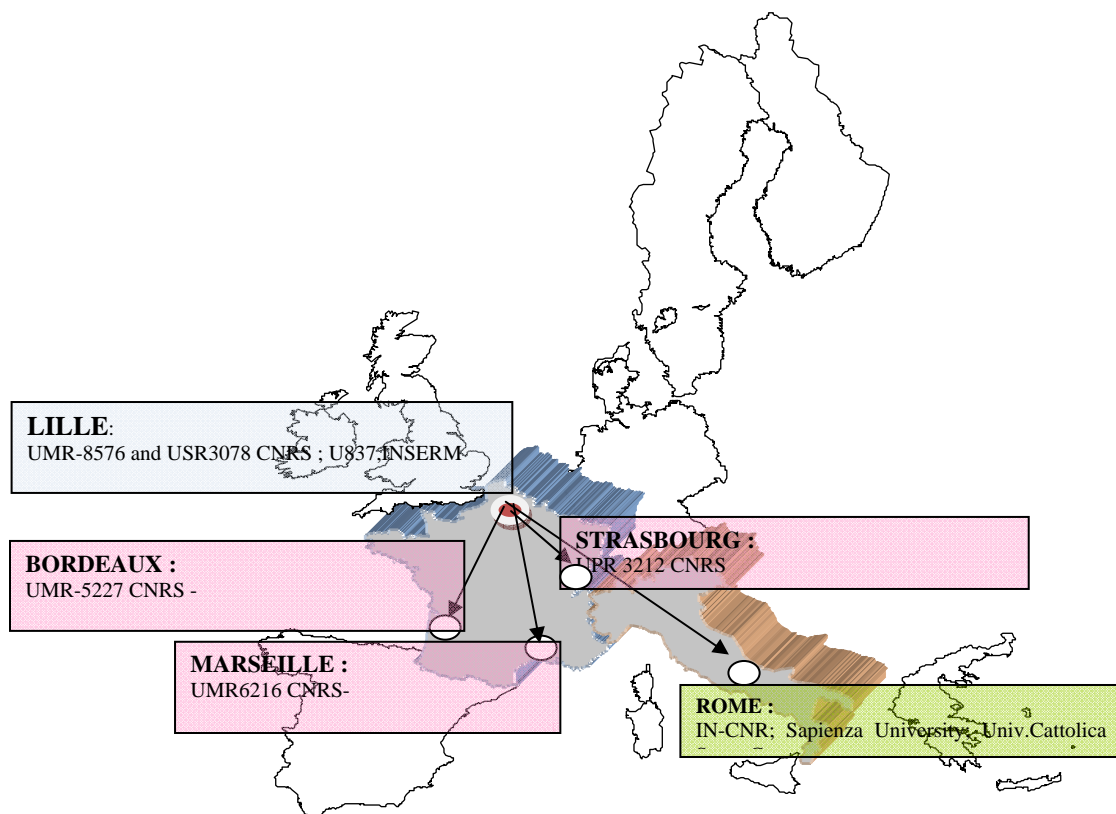
Histone acetylation and deacetylation are well-studied examples of activating and repressive chromatin modifications that are controlled by the balance between locally recruited complexes containing histone acetyl transferases (HATs) and histone deacetylases (HDACs). Imbalance of the HAT-HDAC equilibrium has been linked not only to cancer but there is growing evidence, based on functional and gene ablation studies, for the implication of certain HDACs in a number of other diseases, such as neurodegenerative disorders, osteodystrophy, cardiovascular defects and cardiac hypertrophy. In addition, to their implication in disease HDACs play also a role in aging.

The events causing the HAT-HDAC imbalance are well understood and have provided a rationale for the development of HDAC inhibitors, some of which are currently in advanced clinical testing or, as SAHA, have been approved for therapy. Our project will disclose the role of histone remodeling in the pathophysiology and treatment of early programmed diseases and the therapeutic potential for histone methylation and deacetylation inhibitors in these pathologies. Whether alterations of epigenetic controls will result to play a role in developmental disorders, epi-compounds might have therapeutical and/or preventive value. Current drugs are insufficiently efficacious to cope with modern diseases such as the obesity epidemic sweeping in the developed world, and the most effective treatment for obesity still remains bariatric surgery. The elegant interconnected mechanisms by which the peripheral organs and the brain regulate food intake and the redundancy of the pathways governing energy homeostasis poses formidable challenges for scientist designing antiobesity pharmaceuticals. Our increasing understanding of these regulatory networks is clearly pointing at the emerging need of influencing more than one element of the system jointly to achieve major weight reduction. In this respect, epi-compounds, offer a unique opportunity to target at once multiple marks, thus representing a promising tool to achieve both disease prevention and therapy. Moreover accumulating evidence conduce to consider metabotropic glutamate receptors (mGluR) as potent targets of future antidepressant drugs (Witkin et al. 2007). The consequences of the mGlu receptors modulation on circadian clock has been poorly investigated but their ability to modulate cells metabolic activity, neuronal plasticity, anxiety- and depressive-like behaviours make of this receptors a good candidate for circadian systems regulations. Indeed, group II mGlu receptors agonist administration decreases the rat slow-waves sleep (Feinberg et al., 2002). The consequences of anxiolytic

and antidepressant drugs on the epigenetic and protein's PTM is a very recent question for the neurobiologists and the effects of the mGlu receptors modulation on this epigenetic and proteomics biomarkers remain unexplored. Finally, considering the low antidepressants efficacy and that their positive effects appear after at least 3 weeks of treatment, it is of necessity to develop new, more potent and promptly active antidepressant drugs or combinations of drugs.

Teams: Nicoletti, Maccari, Benecke, Michalski, Moles

## ORGANISATION



## ANNEX 2

A. GDRE “EPMD” COMPOSITION AS OF 1<sup>st</sup> JULY 2009

COUNTRY	INSTITUTION	RESEARCH UNIT / TEAM	PERSONNEL , RANK
France	CNRS and Lille 1	UMR 8576 / PN	Stefania Maccari, Prof. Sara Morley-Fletcher, Mcf Muriel Darnaudery, Mcf Gilles Van Camp, Mcf Jérôme Mairesse, Post-Doc Jordan Marrocco, PhD Student Angela Giovine, PhD Student Hammou Bouwalerh, IE
		UMR 8576 / UGSF	Jean-Claude Michalski, DR Anne-Sophie Vercoutter-Edouart, CR Tony Lefvbre, Prof.
	CNRS, Lille1 and Lille 2	USR 3078	Arndt Benecke, CR Christophe Lavelle, CR Guillaume Brysbaert, IR Hélène Leger, PhD Student
	CNRS, Bordeaux 2 and Bordeaux 1	UMR 5227	Christian Gross, Mcf-PH Bernard Bioulac, Prof Thomas Boraud, CR Tho-Hai Nguyen, T Hugues Orignac, T
	CNRS	UPR 3212	Paul Pevet, DR Etienne Challet, DR Béatrice Bothorel, CR
	CNRS and Aix-Marseille 2	UMR 6216	Annie Daszuta, CR Sylviane Lortet, Mcf



	Inserm and Lille 2	U 837	Sébastien Bouret, CR CNRS Vincent Prevot, CR Sophie Steculorum, PhD Student Christelle Sachot, Post-Doc Yoko Ishii, Post-Doc
Italy	CNR	IN-CNR	Anna Moles, CR Francesca Romana D'Amato, CR Martine Ammassari-Teule, DR Sara Bellantuono, PhD Student Luciana Garbugino, PhD Student Roberto Coccurello, Post-Doc
	Sapienza	Physiology and Pharmacology Dpt V. Erspamer	Nicoletti Ferdinando, Full Prof. Assia Catalani, Associate Prof. Silvana Gaetani, Researcher Annarita Zuena, Post-Doc Vivianna Silletti, PhD Student
	Cattolica Sacro Cuore	Neuroscience Dpt  Pharmacology Istitute	Gioacchino Mennuni, CR Olivier Van Reeth, DR FNRS Giacomo Della Marca, Researcher Pierluigi Navarra, Prof. Cinzia Dello Russo, Dr Giuseppe Tringali, Dr

**B. COMPOSITION OF THE SCIENTIFIC MANAGEMENT COMMITTEE AS OF 1<sup>st</sup> JULY 2009**

RESEARCH UNITS	NAME	CITY, COUNTRY
Unité de glycobiologie structurale et fonctionnelle, UMR 8576	Jean-Claude MICHALSKI	Villeneuve d'Ascq, FRANCE
Laboratoire mouvement adaptation cognition, UMR 5227	Christian GROSS	Bordeaux, FRANCE
Institut des neurosciences cellulaires et intégratives (INCI), UPR 3212	Paul PEVET	Strasbourg, FRANCE
Institut de biologie du développement de Marseille Luminy (IBDML), UMR 6216	Annie DASZUTA	Marseille, FRANCE
Centre de Recherche Jean-Pierre Aubert (JPARC), U 837	Sébastien BOURET	Lille, FRANCE
Institut de recherche interdisciplinaire (IRI), USR3078	Arndt BENECKE	Lille, FRANCE
Institute of Neuroscience	Francesca D'AMATO	Roma, ITALY
Department of Physiology and Pharmacology "V. Erspamer"	Ferdinando NICOLETTI	Roma, ITALY
Pharmacology Institute	Pierluigi NAVARRA	Roma, ITALY
Neuroscience Department	Gioacchino MENNUNI	Roma, ITALY

**C. COMPOSITION OF THE STEERING COMMITTEE AS OF 1<sup>st</sup> JULY 2009**

CNRS	Patrick NETTER*, Director of the Biology Sciences Institute	Paris, FRANCE
Lille 1	Isam SHAOUHROUR, Vice-President of Research	Lille, FRANCE
CNR	Giuseppe MARTINI, Director of the Life Science Department	Roma, ITALY
Sapienza	Vincenzo ZIPARO, Dean of 2 <sup>nd</sup> Medicine Faculty	Roma, ITALY

*\* Chairperson as for the 1<sup>st</sup> of JULY 2009*

**ANNEX 3:**  
**CO-COORDINATORS AS OF 1<sup>st</sup> JULY 2009**

The Parties appoint **Stefania Maccari** and **Anna Moles** as Co-coordinators of the GDRE “EPMD”, with effect from 1<sup>st</sup> July 2009 to the 31<sup>st</sup> December 2012.

**ANNEX 4**  
**GDRE CONSOLIDATED PROJECTED BUDGET FOR 2009**

COUNTRY	INSTITUTION	RESEARCH UNIT	RESOURCES ALLOCATED TO GDRE EPMD	AMOUNT (€ OR FTE*)
France	CNRS	UMR8576	Specific funding:	25 000 €
		UMR 5227		
		UPR 3212		
		UMR 6216	Staff*:	0,5 FTE
		USR3078		
	Lille 1	UMR8576	Specific funding:	7 000 €
		USR3078	Staff*:	0,6 FTE
	Univ. Bordeaux 2	UMR5227	Staff*:	0,1 FTE
	INSERM	U837	Support from research unit:	3 000 €
	Lille2	U837	Specific funding	6 000 €
Italy	CNR	Institute of Neuroscience	Specific funding: Staff*:	3 000 € 0,4 FTE
	Sapienza	Department of Physiology and Pharmacology "V. Erspamer"	Specific funding: Staff*:	5000 € 0,1FTE
	Cattolica Sacro Cuore	Neuroscience Department and Institute of Pharmacology	Specific funding: Staff (FNRS)*:	4000 € 0,1FTE

*\* The staffing needs of the GDRE are calculated based on the full time equivalent (FTE) by its Members coordinating the GDRE (co-coordinators and their staff, members of the Scientific Management Committee) as well as organizing all events sponsored by the network : the annual symposium, talks and thematic schools and international travel.*

## ANNEX 5

### Charter of intellectual property rights and use of Joint Results and Qualified Know-How

- a) The Parties agree that in the event that Joint Results or Joint Qualified Know-How, or
- b) A research collaboration project put into place by certain Parties

emerge from the work carried out by the GDRE, the Parties concerned, by virtue of their inventorship and possibly substantial financial contributions (hereinafter “the Co-Owners”), and unless they unanimously agree to proceed otherwise, shall adopt the following principles applicable to the ownership and exploitation of their Joint Results or Joint Qualified Know-How:

- Co-ownership: a pro rata shared ownership calculated on the inventive contributions and possibly financial contributions; the co-owners shall grant one of them the authority to manage the property and valorize it;
- Industrial or Commercial Exploitation (exclusive or non-exclusive): co-signature by the Co-owners of third-party licensing agreements; shared royalties, based on a pro rata calculation of ownership share, minus a percentage (*customarily 15%*), granted to the managing and valorizing co-owner; in the event of direct exploitation, the principle of fair return on the part of the co-owner exploiting for the benefit of the other co-owner(s);
- Use for internal research purposes: unlimited and free of charge;
- Access rights to Proprietary Results:
  - When necessary to the exploitation Joint Results or Qualified Know-How: under favorable conditions, subject to third party rights;
  - When necessary to carry out a joint research program: free of charge, subject to third party rights.

**ESTRATTO VERBALE N. 5**

Il giorno 12.06.2009 alle ore 12.00 presso l'aula L. Luciani dell'Edificio di Fisiologia si è riunito il Consiglio di Dipartimento per discutere i seguenti punti all'ordine del giorno:

\*\*\* omissis \*\*\*

9.Partecipazione Dipartimento Accordo Quadro CNR Italia – Università di Lille Francia;

\*\*\* omissis \*\*\*

Componenti il Consiglio:

nomativo	P	AG	A
<b>Professori di I fascia</b>			
BADIANI Aldo	X		
CAMINITI Roberto	X		
COLOSIMO Alfredo		X	
CUOMO Vincenzo		X	
EUSEBI Fabrizio		X	
FERRAINA Stefano	X		
GRASSI Francesca	X		
IMPROTA Giovanna	X		
LIMATOLA Cristina	X		
MAZZANTI Gabriella	X		
MELCHIORRI Daniela	X		
MELCHIORRI Pietro			X
NEGRI Lucia	X		
NENCINI Paolo	X		
NICOLETTI Ferdinando			X
NICOLETTI Marcello	X		
STEARDO Luca		X	
<b>Professori di II fascia</b>			
AITA Mariangela	X		
BABILONI Fabio	X		
BATTAGLIA MAYER Alexandra	X		
BROCCARDO Maria	X		
BRUNO Valeria			X
DE FEO Giuseppe			X
FUCILE Sergio	X		
GRASSI M. Caterina	X		
LINARI Giorgio			X
MARTINOLI Lucia	X		
PALMA Eleonora		X	
PALMERY Maura			
PATACCHIOLI F. Romana			



RAGOZZINO Davide		X	
SCOPPETTA Ciriaco		X	
SPAGNUOLO Silvana	X		
TOGNA Giuseppina	X		
<b>Ricercatori</b>			
ALEMA' Sebastiano	X		
ANTONILLI Letizia	X		
BERNARDI Marco	X		
CAMPOLONGO Patrizia	X		
CARUSO Alessandra			X
CASOLINI Paola			X
DANTE Donatella		X	
ESPOSITO Giuseppe			X
FATTORINI Luigi		X	
GAETANI Silvana	X		
GENOVESIO Aldo	X		
GRAZIANI Manuela	X		
LATTANZI Roberta	X		
MASTROIACOVO Paola		X	
MONACO Lucia	X		
NOVIELLO Lia	X		
NOVIELLO Vittoria	X		
ONORATI Paolo			X
ROMANELLI Luca		X	
SASO Luciano		X	
SCACCIANOCE Sergio	X		
TOGNA Anna Rita		X	
TRETTEL Flavia	X		
VITALONE Annabella		X	
<b>Assistenti Ordinari</b>			
BOLLE Paola			X
CATALANI Assia		X	
CAROFILIO Francesco S.			X
GROSSI BELLONI Daniela		X	
TITA Beatrice			X
ZIPARO Rita Maria	X		
<b>Personale non docente</b>			
CHECE Giuseppina			X
GENTILE Domenico	X		
LA SALA Loredana	X		
LEZZA Gaetano		X	
RUNCI Antonella		X	
SECONDULFO Annamaria	X		
STROPICCIOLI Annino	X		
VACCINA Carla	X		





VALERI Daniela	X		
<b>Rappresentanti Studenti</b>			
CIPRIANI Raffaella	X		
GIANNINI Elisa			X
MAIOLINO Francesca			X
MATRISCIANO Francesco			X
MORICONI Claudia			X
NICOTRA Annalisa			X
RIGHETTI Laura			X
ROMANO Adele			X
PETRELLA Carla			X
<b>Il Segretario Amministrativo</b>			
DI FLORIO DI RENZO Cinzia	X		

P= presente A = assente AG= assente giustificato

La seduta odierna è presieduta dal Vice Direttore, Prof. Paolo Nencini, funge da segretario la Dott.ssa Cinzia Di Florio Di Renzo. Accertata la presenza del numero legale, il Presidente apre la discussione con il primo punto all'ordine del giorno:

\*\*\* OMISSIS \*\*\*

#### 9.PARTECIPAZIONE DIPARTIMENTO ACCORDO QUADRO CNR ITALIA – UNIVERSITÀ DI LILLE FRANCIA.

Il Presidente presenta la proposta giunta dai proff. F.Nicoletti, A.Catalani e S.Gaetani di partecipazione al progetto "AGREEMENT TO CREATE A EUROPEAN RESEARCH NETWORK (GDRE)" dal titolo STUDY OF MECHANISMS UNDERLYING THE EARLY PROGRAMMING OF MODERN DISEASES (EPMD). Tale agreement è stipulato tra il CNR francese e il CNR italiano ed entrambi questi centri possono coordinare più gruppi di ricerca, rispettivamente francesi ed italiani appartenenti ad enti di ricerca o ad Università per costituire "A European Research Network, a cooperative structure devoid of legal status..., for a term of four years". Come da dichiarazione sottoscritta dai professori su indicati, il Presidente informa che il finanziamento sarà a carico dei fondi di ricerca di cui è responsabile scientifica la prof.ssa Catalani.

Il Consiglio all'unanimità approva la proposta presentata e già approvata dalla Giunta di Dipartimento.

\*\*\* OMISSIS \*\*\*

Alle ore 13.00 il Presidente, null'altro essendovi da discutere, dichiara sciolta la seduta.

IL SEGRETARIO  
(dott.ssa Cinzia Di Florio Di Renzo)

Roma, 12.06.2009  
p.c.c. all'originale

IL SEGRETARIO AMM.VO  
(dott.ssa Cinzia Di Florio Di Renzo)

IL PRESIDENTE  
(prof. Paolo Nencini)

