



La gazette du GDR 3606 REPRO



N°5 Janvier 2015

En ce début d'année 2015, l'équipe de direction du GDR REPRO vous renouvelle tous ses vœux de succès dans vos entreprises professionnelles et de bonheur dans votre vie personnelle et familiale.

- **ReproSciences 2015, toutes les infos à:**
<http://gdrepro.com/reprosciences-2015/>



Date limite d'inscription 15 février

<http://gdrepro.com/reprosciences-2015/inscriptions/>

Il est fondamental pour l'avenir du GDR que cette première édition de ReproSciences soit un succès. Aussi, nous vous engageons à participer et à encourager vos collègues à en faire autant. L'inscription est très bon marché et, pour encourager la participation des plus jeunes, elle est gratuite pour les étudiants. Nous espérons également pouvoir lever suffisamment de fonds pour financer une partie de leurs frais. Une session est réservée aux jeunes scientifiques pour des présentations « flash ». voir:

<http://gdrepro.com/reprosciences-2015/students-and-post-docs/>

Venez nombreux

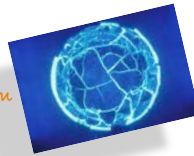
Dates à retenir	
1er décembre 2014	Début des inscriptions
1 février 2015	Demande de bourse de voyage (étudiants et post-docs)
15 février 2014	Date limite des inscriptions
15 février 2014	Date limite de paiement
15 février 2015	Soumission des abstracts
13 avril à 12:00	Début de ReproSciences 2015
15 avril à 13:00	Fin de ReproSciences 2015



✓ Les événements



- January 29-30 2015: XXXième Congrès de la Société d'Andrologie de la langue Française, Dijon, France. (<http://www.salf.fr/site/>)
- February 8-11 2015: Reproductive biology of fish: from major breakthroughs to future research, Rennes, France (<https://colloque.inra.fr/isrbf2015>)
- February 8-9 2015: 3rd International Congress of Large Animal Practitioners (ICLAP 2015), Tehran, Iran (<http://iclap.ir>)
- February 9-10 2015: CRB-Anim Séminaire Bi-annuel 2015 Paris 15^{em} <http://www.crb-anim.fr/Page-d-accueil/Actualites/CRB-Anim-Seminaire-Bi-annuel-2015>
- February 25-27 2015: International Symposium on Reproductive Biology and Comparative Endocrinology, Varanasi, India (<http://isrbce.wordpress.com>)
- March 9th-10th 2015 : EFOR SEMINAR 6th EDITION paris 75014. <http://efor.tefor.net/pages/post/?subject=events&id=252>
- March 12-13 2015: European Society of Human reproduction and Embryology, Copenhagen, Denmark (<http://isrbce.wordpress.com>)
- March 18-21 2015: World Congress on Human Reproduction 2015, Berlin, Germany (<http://www.humanrep2015.com>)
- Mars 25, 26 et 27 2015: XXIIIème Séminaire Interne des CECOSFEDERATION FRANCAISE DES CECOS TOULOUSE. Contact : secretariatcecos@yahoo.fr Inscription DPC : <https://umfcs.univ-amu.fr> et www.mondpc.fr



✓ Les événements (suite)

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March 30- 31 2015 International Symposium on Dairy animal Reproduction Lahore Pakistan (University of Veterinary & Animal Sciences in collaboration with Society for Animal Reproduction of Pakistan <http://www.uvas.edu.pk/ISDAR2015>)
- April 13-15 2015: **ReproSciences 2015** » Rennes, France Les 1ères journées du GDR
<http://gdrepro.com/reprosciences-2015/>


- April 13-15 2015 : Perspectives in Environmental and Systems Biology Grenoble France <http://www.beesy2015.com/>
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May 7-9 2015 : 1ST Congress of the society of endometriosis and uterine disorders Paris France <http://seud-congress.com>
- Mai 19-22 2015 : Société des Neurosciences 12ème colloque Montpellier France <http://www.neurosciences.asso.fr>
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June 7-12 2015 : EMBL-EBI Wellcome Trust workshop on In Silico Systems Biology Hinxton, Cambridge, UK
<http://advanced-courses-wellcome.msgfocus.com/c/1603vePBAEPZXF67bCPVXEY>
- June 18-19 2015 : 4ème rencontre du Groupe de la francophonie Placentaire (GfP) Genève, CH
 Programme en construction
- 11 décembre 2015 Réunion transversale "Différenciation des Gonades » à Nice



June 26-30th 2016 International Congress of Animal Reproduction Tours France ICAR
 (site en cours de création)

More events at : <http://gdrepro.com/evenements/>

Contact: gdrepro@univ-rennes1.fr

Site web: <http://gdrepro.com>

✓ Les jobs



"Post-doctoral position in development, micro environment and genetic alterations in adrenal lesions within carney complex"

A twenty four-month postdoctoral position is available in team 10 - Adrenocortical Tumorigenesis & Adipose Tissue Homeostasis directed by Dr. Antoine Martinez at GRED laboratories CNRS UMR6293, INSERM U1103 in Clermont-Ferrand.

Contact : antoine.martinez@univ-bpclermont.fr <https://www.gred-clermont.fr> 



"Post-doctoral position in ecophysiology, IRBI, Tours, France"

The "Institut de Recherche sur la Biologie de l'Insecte" (IRBI) at the University François Rabelais (Tours, France) is searching for a qualified candidate for a 2-years postdoctoral position .

Contact : Charlotte Lécoreuil charlotte.lecoreuil@univ-tours.fr <http://irbi.univ-tours.fr/index.php?page=emplois-stages-EH-fr> 



" Post-doctoral position at NIEHS/NIH North Caroline, U.S.A."

National Institute of health National Institute of Health sciences

Contact : Dr Humphrey Yao Humphrey.yao@nih.gov .

<http://www.niehs.nih.gov/research/atniehs/labs/lrdt/pi/developmental/> 



" Commercial Génétique porcine Bretagne / France."

"Commercial Génétique porcine Hollande / Eindhoven/Rotterdam/ Arnhem. Type de contrat CDI Annonce : Commercial n° 549

Contact: Roman Rouillé : job@jonenanglais.com



- "2 Post-doctoral Fellowships in Cell and Developmental Biology"
Faculty of Health and Medical Sciences, University of Copenhagen The NNF Danish Stem Cell Center -DanStem
The tenure of the positions is initially for two years, with the possibility of extension. <http://danstem.ku.dk/join/jobs/postdoctoral-fellowships> 



✓ Les jobs (suite)

- "Post-doctoral position in Preimplantation development"
A post-doctoral position is currently open at the GRED (Clermont-fd) in the team of Claire Chazaud (<http://www.gred-clermont.fr>). This position is funded for at least two years. The team is addressing the topics of cell lineage specification, pluripotency and differentiation.
Contact: claire.chazaud@udamail.fr
- "Post-doctoral position: laboratory of Fish Physiology and Genomic" (INRA LPQP) in Rennes (France)
Title of the project: Responses of HPI axis and brain neurogenesis to early stress and nutritional stress in rainbow trout.
Contact: Patrick.prunet@rennes.inra.fr



✓ Accueil de chercheurs

Offre d'accueil de chercheurs Inserm, Unité Inserm 1203, IRMB, Montpellier



Notre Unité Inserm 1203 intitulée « Développement Embryonnaire Précoce Humain et Pluripotence » vient d'être créée au 1er Janvier 2015. Nous souhaitons accueillir des chercheurs Inserm (DR ou CR) désireux de développer une activité s'inscrivant dans nos thématiques de recherche.

Les axes majeurs développés au sein de notre équipe sont :

- 1) la caractérisation des interactions entre l'ovocyte et sa niche (les cellules du cumulus),
- 2) le dynamisme du développement de l'embryon pré-implantatoire,
- 3) les mécanismes d'acquisition et de maintien de la pluripotence,
- 4) la réceptivité de l'endomètre,
- 5) les acides nucléiques circulants.

Notre recherche présente un fort potentiel de valorisation. Notre unité est située à Montpellier, ville dynamique, où le pôle Biologie-Santé est particulièrement développé. Les candidatures sont à adresser au directeur de l'Unité Inserm 1203 : Professeur Samir Hamamah : <mailto:s-hamamah@chu-montpellier.fr>





Les Formations



- Registrations for the next edition of the European course on "Comparative Genomics" are open.

This year the course will be held on 26 January - 6 February 2015 at the ENS (Lyon, France). This course is organized by the Ecole Normale Supérieure (ENS) of Lyon (France) since 2008. It is aimed at students from the ENS and is open to master and PhD students from European universities.

The course focuses on major discoveries, big challenges, innovative concepts and original approaches in the field of comparative genomics, their applications in biology, medicine and biotechnology, and their impact on society.

Registration is free. Lectures are in English.

The preliminary program and registration form are available at: <http://lbbe-dmz.univ-lyon1.fr/spip.cgi/>

Jean-Nicolas Volff (ENS, Lyon) and Céline Brochier (Univ. Lyon1)



✓ Stages à Taiwan pour étudiants en thèse

- Research and Practical Training Program in Taiwan 2015 June 29 - August 21
The Ministry of Science and Technology of Taiwan (MOST) has opened the call for its Research and Practical Training Program in Taiwan 2015. Through this program, the MOST intends to provide grants to French graduate students interested in undergoing a first-hand research or practical experience in Taiwan. The goals of the program are to introduce students to Taiwanese cultural, scientific and technological development, and to initiate personal relationships that will better enable them to collaborate with foreign counterparts in the future. Application is open to students from all fields of study. 30 grants will be offered in 2015. <http://france.most.gov.tw>

✓ Les Formations

- EMBL-EBI-Wellcome Trust workshop on In Silico Systems Biology, 7-12 June 2015 - Hinxton, Cambridge, UK



Applications are invited for this joint EMBL-EBI-Wellcome Trust workshop. The week-long programme will combine lectures on modelling approaches, led discussions to identify the key challenges, opportunities and bottlenecks, and practical sessions on network analysis and network-based modelling.

The workshop is aimed at PhD students and researchers with a minimum of one year's experience in the field of systems biology modelling, and who are using systems-based modelling approaches to understand biomedical problems. It is beneficial if participants have experience of using pathway modelling in their work. Full details are on the workshop website.

Limited bursaries for PhD students covering up to 50% of the workshop fee are also available. Bursaries are awarded on merit. Applications and bursary requests must be received by 23 January 2015.

Open for Applications (apply by 23 January)

<http://advanced-courses-wellcome.msgfocus.com/c/1603vePBAEPZXF67bCPVXEY>

✓ Ressource

Interface conviviale de type WebResource de l'algorithme d'analyse du rythme de sécrétion de LH DynPeak : <https://dynpeak.inria.fr>

Dynpeak est un algorithme dédié à la détection de pulses et à l'analyse interactive des rythmes de sécrétion dans les séries temporelles hormonales, et en particulier de LH. Il prend en compte des propriétés inhérentes aux événements de sécrétion (forme et demi-vie du pulse, régularité des changements de rythmes, ...) et est adapté au caractère structurellement sous-échantillonné des séries expérimentales.

Voir: A. Vidal, Q. Zhang, C. Médigue, S. Fabre, F. Clément.

DynPeak : An algorithm for pulse detection and frequency analysis in hormonal time series. PLoS One, 2012, 7: e39001

<http://dx.doi.org/10.1371/journal.pone.0039001>

DynPeak existe aussi sous la forme d'une toolbox scilab :

<http://atoms.scilab.org/toolboxes/Dynpeak>

Tous ces liens sont disponibles depuis <https://team.inria.fr/mycenae/en/software/>

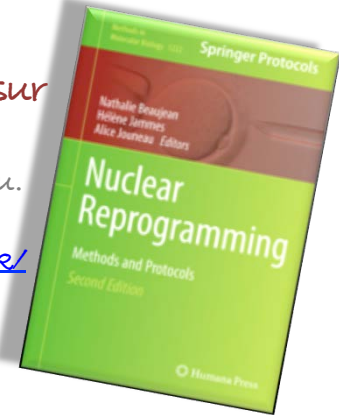
✓ La librairie



Numéro spécial de *Methods in Molecular Biology* sur le thème "Nuclear Reprogramming"

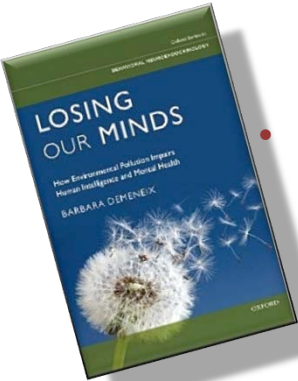
Editors : Nathalie Beaujean, H el ene Jammes, Alice Jouneau.

Informations:
<http://www.springer.com/life+sciences/cell+biology/book/978-1-4939-1593-4>



- **Losing Our Minds: How Environmental Pollution Impairs Human Intelligence and Mental Health**

De notre coll egue Barbara Demeneix, Professeure au MNHN Oxford Series in Behavioural Neuroendocrinology (2014)



- Une  dition sp ciale sur le d veloppement du blastocyste - De la pluripotence   la diff renciation - vient d' tre publi e par la Royal Society:

'From pluripotency to differentiation: laying the foundations for the body pattern in the mouse embryo' compiled and edited by Magdalena Zernicka-Goetz and Anna-Katerina Hadjantonakis

Philos Trans R Soc Lond B Biol Sci. 2014 Dec 5, Vol 369 Issue 1657

' <http://rstb.royalsocietypublishing.org/content/369/1657>"

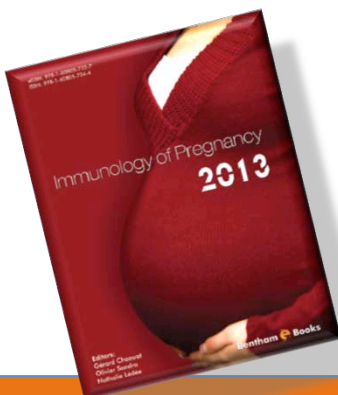


- **"Immunology of pregnancy 2013"**

Editors : G rard Chaouat, Olivier Sandra, Nathalie L d e Bentham E book

Informations:

<http://www.isir.org.in/immunologyofpregnancy.pdf>



Publications des Equipes du GDR

A new chapter in the bisphenol A story: bisphenol S and bisphenol F are not safe alternatives to this compound.

Soria Eladak, M.Sc.,^{a,b,c} Tiphany Grisin, M.Sc.,^{a,b,c} Delphine Moïson, M.Sc.,^{a,b,c} Marie-Justine Guerquin, Ph.D.,^{a,b,c} Thierry N'Tumba-Byn, Ph.D.,^{a,b,c} Stephanie Pozzi-Gaudin, M.D.,^d Alexandra Benachi, M.D., Ph.D.,^d Gabriel Livera, Ph.D.,^{a,b,c} Virginie Rouiller-Fabre, Ph.D.,^{a,b,c} and Rene Habert, Ph.D.,^{a,b,c,a}

Bisphenol A (BPA) is a widely studied typical endocrine-disrupting chemical, and one of the major new issues is the safe replacement of this commonly used compound. Bisphenol S (BPS) and bisphenol F (BPF) are already or are planned to be used as BPA alternatives. With the use of a culture system that we developed (fetal testis assay [FETA]), we previously showed that 10 nmol/L BPA reduces basal testosterone secretion of human fetal testis explants and that the susceptibility to BPA is at least 100-fold lower in rat and mouse fetal testes. Here, we show that addition of LH in the FETA system considerably enhances BPA minimum effective concentration in mouse and human but not in rat fetal testes. Then, using the FETA system without LH (the experimental conditions in which mouse and human fetal testes are most sensitive to BPA), we found that, as for BPA, 10 nmol/L BPS or BPF is sufficient to decrease basal testosterone secretion by human fetal testes with often nonmonotonic dose-response curves. In fetal mouse testes, the dose-response curves were mostly monotonic and the minimum effective concentrations were 1,000 nmol/L for BPA and BPF and 100 nmol/L for BPS. Finally, 10,000 nmol/L BPA, BPS, or BPF reduced Insl3 expression in cultured mouse fetal testes. This is the first report describing BPS and BPF adverse effects on a physiologic function in humans and rodents. (*Fertil Steril* 2015;103:11-21. ©2015 by American Society for Reproductive Medicine.)

[http://www.fertstert.org/article/S0015-0282\(14\)02351-6/pdf](http://www.fertstert.org/article/S0015-0282(14)02351-6/pdf)

<http://www.univ-paris-diderot.fr/pageActu.php?num=6878> et

http://www.lemonde.fr/planete/article/2015/01/20/les-alternatives-au-bisphenol-a-sont-elles-moins-risquees-pour-la-sante_4559628_3244.html L'article dans *Fertility and Sterility* est en open access

Leptin-dependent neuronal NO signaling in the preoptic hypothalamus facilitates reproduction.

Bellefontaine N, Chachlaki K, Parkash J, Vanacker C, Colledge W, d'Anglemont de Tassigny X, Garthwaite J, Bouret SG, Prevot V.

J Clin Invest. 124:2550-2559.

Humans and mice lacking the adipose-derived hormone leptin fail to complete puberty and are infertile; however, the mechanisms underlying leptin's effects on the reproductive axis are unknown. This paper shows that leptin acts on nitric-oxide (NO)-synthesizing neurons in the preoptic region of the hypothalamus to regulate peripheral levels of leutinizing hormone (LH). Mathematical modeling suggested that leptin action in the preoptic region leads to NO build-up that is of a sufficient concentration to induce the release of gonadotropin-releasing hormone (GnRH), the neurohormone controlling fertility, and subsequent LH secretion by the pituitary. These data demonstrate that leptin communicates the status of peripheral energy stores to GnRH neurons via the NOergic neurons of the preoptic hypothalamus to regulate fertility.





Publications des Equipes du GDR

Brain Endothelial Cells Control Fertility through Ovarian-Steroid-Dependent Release of Semaphorin 3A

Giacobini P, Parkash J, Campagne C, Messina A, Casoni F, Vanacker C, Langlet F, Hobo B, Cagnoni G, Gallet S, Hanchate NK, Mazur D, Tanaguchi M, Mazzone M, Verhaagen J, Ciofi P, Bouret SG, Tamagnone L, Prevot V (2014) PLoS Biol 12:e1001808.

In the developing embryo, endothelial cells release chemotropic signals such as Semaphorin 3A (Sema3A) that regulate neuronal migration and axon guidance; however, whether endothelial cells in the adult brain retain the ability to secrete molecules that influence neuronal function is unknown. This paper shows that, in the adult brain, vascular endothelial cells release Sema3A to promote the outgrowth of axons of hypothalamic neurons that release gonadotropin-releasing hormone (GnRH) towards the endothelial wall of portal blood vessels. Notably, this endothelial-cell-mediated sprouting of GnRH axons regulates neuropeptide release at a key stage of the estrous cycle, the proestrus, when the surge of GnRH triggers ovulation and hence plays a pivotal role in orchestrating the central control of reproduction. Vascular endothelial cells thus appear to be dynamic signaling components that relay information to the brain to control key physiological functions, including species survival.

Neonatal testosterone suppresses a neuroendocrine pulse generator required for reproduction.

Israel JM, Cabelguen JM, Le Masson G, Oliet SH, Ciofi P (2014) Nat Commun 5:3285.

Brain hormones are secreted into the blood stream in pulses, instead of continuously, to prevent fatigue of target organs. What causes pulsatility is unknown. The authors studied the pulsatile electrical activity of the neurons secreting oxytocin, the hormone provoking contractions of the uterus at birth and of the mammary gland for milk release. They discovered that oxytocin neurons' pulsatility is driven by a neuronal network similar to those controlling activities like breathing or walking. The pulsatility-network was active in new-borns of both sexes but later degenerated in males during the process of sexual differentiation whereby brain sex adjusts to body sex.

♥ Toutes nos félicitations à **Fatima Smagulova**, équipe Atip-Avenir de l'Irset, dont la dernière publication scientifique intitulée

"Recombination initiation maps of individual human genomes" vient de paraître dans le journal Science !

Réf. : Science 14 NOVEMBER 2014 • VOL 346 ISSUE 6211

Abstract : <http://www.sciencemag.org/content/346/6211/1256442.abstract>

Anti-Müllerian Hormone Regulation by the Bone Morphogenetic Proteins in the Sheep Ovary: Deciphering a Direct Regulatory Pathway

Anthony Estienne, Alice Pierre, Nathalie di Clemente, Jean-Yves Picard, Peggy Jarrier, Camille Mansanet, Danielle Monniaux, and Stéphane Fabre Endocrinology (2015) 156: 301-313

