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DR2-CNRS
Marié, 2 enfants
55 ans

Cursus scientifique

CNRS –Directeur de Recherche 2ème classe **2011-actuel**
Biophysique des canaux potassiques cardiaques.
INSERM UMR1087 CNRS UMR 6291. Nantes.
Directeur: R. Redon.

Chercheur invité, Université de Californie à San Francisco **2012-2013**
Focus: collaboration avec le laboratoire de Daniel Minor sur la structure des canaux sodiques

HDR - Physiologie moléculaire des canaux potassiques **Juillet 2005**

CNRS – Nommé Chargé de Recherche **2001-2011**
Biophysique des canaux potassiques cardiaques.
Unité INSERM U533/UMR915. Nantes. Directeurs: Prof. D. Escande./P Pacaud

POST DOCTORAT **1997-2001**
Structure et fonctions des canaux potassiques rectifiant entrant
Département de biologie cellulaire. Washington University of St Louis, USA
Directeur: Dr. C.G. Nichols.

DOCTORAT de l'université Paris XI **1994-1997**
Rôle physiopathologique des canaux potassiques
INSERM CJF 96.01. Nantes. Directeur: Prof. D. Escande.

DIPLOME D'INGENIEUR AGRONOME **1990-1992**
Ecole Nationale Supérieure Agronomique, Rennes

Financements

- ANR Jeunes chercheuses et Jeunes chercheurs 2005 - 2008 (porteur de projet): 150 k€
- AFM 2009-2010 (porteur de projet) : 26 k€,
- Génavie 2011 (porteur de projet) : 10 k€
- Dotation FFC/SFC 2011-2012 (porteur de projet) : 80 k€
- Marie Curie 2012-2014 : 158 k€
- AFM 2013-2015 (porteur de projet) : 100 k€
- PHC-Kolmogorov 2015-2017 (porteur de projet) : 15 k€
- Génavie 2016 (porteur de projet) : 12 k€

- Fédération Française de Cardiologie-grands projets (2019-2022): 300 k€
- Pari Scientifique (2019-2021): 150 k€
- ANR flash covid (2020-2021): 200 k€
- ANR Cardiag (2022-2025): 522 k€

Activité d'encadrement

- Encadrement de post-doctorants en France :
  Kyu-Ho Park (2003-2004, maintenant senior researcher à l'institut Pasteur Korea), Nicolas Rodriguez (2006-2008, maintenant Maitre de Conférence, Sorbonne Université), Zeineb Es Salah Lamoureux (2011-2015, maintenant coordinatrice d'études cliniques au CHU de Nantes), Olfat Malak (2017-2018, maintenant post-doc au Buck Institute for Research on Aging, Novato, USA), Jérome Montnach (2019-2021, maintenant CR CNRS) Barbara Ribeiro (2018-2023, maintenant CR Inserm),
- Encadrement d'étudiants en thèse en France et aux USA:
  ***USA** : Revell Phillips (1999-2000, maintenant Science and Technology Manager, Defense Threat Reduction Agency), Ricard Masia (2000-2001, maintenant Anatomo-pathologiste Dragonfly Therapeutics)*
  ***France** : Aziza El Harchi (2003-2006, maintenant senior researcher à l'université de Bristol), Julien Piron (2005-2008, maintenant entrepreneur), Frank Choveau (2006-2009, maintenant Ingénieur de Recherche à l'IHU Lyric, Bordeaux), Yassine Mohamed Amarouch (2008-2010, maintenant Professeur à l'Université de Sidi Mohamed Ben Abdellah, Fès), Fayal Abderemane Ali (2010-2013, maintenant PI à UCLA), Fabien Coyan (2011-2014, maintenant Business Analyst senior, Rennes), Olfat Malak (2014-2017 maintenant post-doc au Buck Institute for Research on Aging, Novato, USA), Malak Alamek (2021-).*
- Encadrement d'étudiants L3/Master1/Master2 en Sciences Biologiques et Médicales
- Encadrement d'étudiants en Bioinformatique
  Anne-Lise Moisdon (3ème année INSA Rennes), *Sandrine Panel* (MasterPro Bioinformatique Nantes), *Pierre Olchesqui* (Master1 Bio-informatique, Bio-statistique)

Autres activités

- **Associate editor** pour Frontiers in Pharmacology
- **Enseignement** en Master1 « Biologie et Biopathologie du Thorax » (Nantes), en Master1 « Sciences du médicament » (Nantes) et en Master2 « Biologie Moléculaire et Cellulaire » (Rennes)
  - **Référé** pour 'European Journal of Pharmacology', 'Frontiers in Physiology, 'Wellcome Open Research', 'Frontiers in Cellular Neuroscience', 'Nature Communication', 'Journal of Molecular and Cellular Cardiology', 'Journal of Physiology', 'Pflugers Archiv-European Journal of Physiology', 'Journal of General Physiology', 'Journal of Biological Chemistry', 'Human Genetics', 'British Journal of Pharmacology', 'Plos One', 'Biophysical Journal', 'Expert Reviews in Molecular Medicine', 'Nature Chemical Biology', 'Cellular Physiology and Biochemistry',' Frontiers in Pharmacology', 'Journal of Medical and Biological Engineering', 'BBA-Biomembranes'.
- **Rapporteur des thèses** de :

- Julien Dupuis (‘Interaction directe récepteur-canal K_{ATP}’, 2008, CEA, Grenoble),
- Nathalie Helix-Nieslen (‘Trafficking and intracellular regulation of Kv7.1 potassium channel in the heart’, 2008. Université de Copenhague, Danemark),
- Reda Assal (‘Méthodes de production et étude électrophysiologique de canaux ioniques : application à la pannexine1 humaine et au canal mécanosensible bactérien’, 2011, Parix XI)
- Katarzyna Niescierowicz (‘Development of the ion channel-coupled receptor technology in structure function studies of G protein-coupled receptors and kir6.2 channel’, 2013, CEA, Grenoble).
- Camille Barbier (‘Régulation de l'expression membranaire et dynamique du canal potassique Kv1.5 dans les cardiomyocytes atriaux’, 2016, UPMC, Paris VI)
- Catalina Reyes (‘Etudes Moléculaires du canal potassique sensible à l'ATP: "gating", pathologie et optogénétique’, 2016, CEA, Grenoble).
- Dieter Van de Sande (‘Suitability of hSC and hiPSC derived cardiomyocytes as in vitro cell model that represents the physiological conditions for cardiotoxicity screening.’, 2021, University of Antwerp)

- **Examinateur des thèses** de :
  - Mohamed Yassine Amarouch (‘Mort subite et complexes moléculaires des canaux ioniques cardiaques’, 2010, Nantes Atlantique Université),
  - Lucie Delmotte (‘Fonction et modulation des canaux Kv : étude par simulation de dynamique moléculaire’, 2011, Université H. Poincaré, Nancy)
  - Audrey Deyawe Kongmeneck (‘investigation des mécanismes d’activation et de couplage du canal potassique voltage-dépendant Kv7.1 dans les cardiomyocytes à l’aide de méthodes computationnelles’, 2020, Université de Lorraine, Nancy)
  - Dania Zungia (‘Structural and functional characterization of a human potassium channel, kir2.1’, 2022, Sorbonne Université),

- **Rapporteur de l’HDR** de:
  - Delphine Bichet (‘Assemblage et Fonctionnement Biophysique des Canaux Potassiques’, 2016, IPMC, Valbonne).

- **Expertise** de dossiers de candidature pour le **Human Frontiers Science Program,** le **Wellcome Trust**, la **National Science Foundation**, **l’Israel Science Foundation**, le **Biotechnology and Biological Sciences Research Council**, **la Binational Science Foundation**, **l’ANR, le FONDECYT, l’Académie des Sciences d’Autriche**, **l’AFM, la région Bretagne, la région île de France, l’université Grenoble Alpes, le Musculoskeletal Research Center à St Louis**.

- Rédaction d’un Blog pour la Société Américaine de Biophysique sur la protéine du HIV Tat. 1er Décembre 2016. https://biophysicalsociety.wordpress.com/tag/hiv-tat/
- Participation à la nuit blanche des chercheurs de Nantes le 9 février 2017.
- Membre du comité Scientifique du colloque « Microscopie électronique pour Les Sciences du Vivant à l'Université de Nantes » le 21 Juin 2019

- Intervention pour des donateurs de la Fédération Française de Cardiologie : une base de données cliniques pour les troubles du rythme héréditaires, Octobre 2022
- Participation à la nuit blanche des chercheurs de Nantes le 2 février 2023.
- Membre du comité Scientifique du colloque « Caractérisation par microscopie électronique en transmission des échantillons hydratés et/ou sensibles aux électrons » Nantes, le 11 Juin 2024

Sociétés savantes

- ***Membre de la Biophysical Society (depuis 1998)*** et de la Société Française de Cardiologie

Articles originaux

51. AL-SAYED Z, PEREIRA C, LE BORGNE R, VIARIS DE LESEGNO C, JOUVE C, PENARD E, MALLET A, MASURKAR N, **LOUSSOUARN G**, VERBAVATZ JM, LAMAZE C, TREGOUËT DA, HULOT JS. CAVIN1-Mediated hERG dynamics: A Novel Mechanism Underlying The Interindividual Variability In Drug-Induced Long QT. *Circulation*. 150:563,2024.

50. OLIVEIRA-MENDES BBR, ALAMEH M, OLLIVIER B, MONTNACH J, BIDÈRE N, SOUAZÉ F, ESCRIOU N, CHARPENTIER F, BARÓ I, DE WAARD M, **LOUSSOUARN G**. SARS-CoV-2 E and 3a Proteins Are Inducers of Pannexin Currents. *Cells* 12(11):1474, 2023.

49. OLIVEIRA-MENDES BBR, ALAMEH M, MONTNACH J, OLLIVIER B, GIBAUD S, FELICIANGELI S, LESAGE F, CHARPENTIER F, **LOUSSOUARN G,** DE WAARD M, BARÓ I. Predicting hERG repolarization power at 37°C from recordings at room temperature. *Clin Transl Med.* 13:e1266, 2023.

48. FILIPIS L, BLÖMER LA, MONTNACH J, **LOUSSOUARN G**, DE WAARD M, CANEPARI M. Nav1.2 and BK channel interaction shapes the action potential in the axon initial segment. *J Physiol.* 601(10):1957-1979, 2023.

47. CAILLAUD M, LE DRÉAN ME, DE-GUILHEM-DE-LATAILLADE A, LE BERRE-SCOUL C, MONTNACH J, NEDELLEC S, **LOUSSOUARN G,** PAILLÉ V, NEUNLIST M, BOUDIN H. A functional network of highly pure enteric neurons in a dish. *Front Neurosci.* 16:1062253, 2023.

46. KARLOVA M, ABRAMOCHKIN DV, PUSTOVIT KB, NESTEROVA T, NOVOSELETSKY V, **LOUSSOUARN G**, ZAKLYAZMINSKAYA E, SOKOLOVA OS. Disruption of a Conservative Motif in the C-Terminal Loop of the KCNQ1 Channel Causes LQT Syndrome. *Int J Mol Sci*. 23:795, 2022.

45. OLIVEIRA-MENDES B, FELICIANGELI S, MÉNARD M, CHATELAIN F, ALAMEH M, MONTNACH J, NICOLAS S, OLLIVIER B, BARC J, BARÓ I, SCHOTT JJ, PROBST V, KYNDT F, DENJOY I, LESAGE F, **LOUSSOUARN G**, DE WAARD M. A standardised hERG phenotyping pipeline to evaluate KCNH2 genetic variant pathogenicity. *Clin Transl Med.* 11:e609, 2021.

44. AL SAYED ZR, JOUNI M, GOURRAUD JB, BELBACHIR N, BARC J, GIRARDEAU A, FOREST V, DEREVIER A, GAIGNERIE A, CHARIAU C, CIMAROSTI B, CANAC R, OLCHESQUI P, CHARPENTIER E, SCHOTT JJ, REDON R, BARÓ I, PROBST V, CHARPENTIER F, **LOUSSOUARN G**, ZIBARA K, LAMIRAULT G, LEMARCHAND P, GABORIT N. A consistent arrhythmogenic trait in Brugada syndrome cellular phenotype. *Clin Transl Med.* 11:e413, 2021.

43. MONTNACH J, BARÓ I, CHARPENTIER, DE WAARD M, **LOUSSOUARN G**, Modeling sudden cardiac death risks factors in covid-19 patients – the hydroxychloroquine and azithromycin case. *Europace* 23:1124-1133, 2021.

42. MONTNACH J, LORENZINI M, LESAGE A, SIMON I, NICOLAS S, MOREAU E, MARIONNEAU C, BARÓ I, DE WAARD M, **LOUSSOUARN G**. Computer modeling of whole-cell voltage-clamp analyses to delineate guidelines for good practice of manual and automated patch-clamp. *Sci Rep.* 11:328, 2021.

41. DE WAARD S, MONTNACH J, RIBEIRO B, NICOLAS S, FOREST V, CHARPENTIER F, MANGONI ME, GABORIT N, RONJAT M, **LOUSSOUARN G**, LEMARCHAND P, DE WAARD M. Functional Impact of BeKm-1, a High-Affinity hERG Blocker, on Cardiomyocytes Derived from Human-Induced Pluripotent Stem Cells. Int J Mol Sci. 21:7167, 2020.

40. AL SAYED ZR, CANAC R, CIMAROSTI B, BONNARD C, GOURRAUD JB, HAMAMY H, KAYSERILI H, GIRARDEAU A, JOUNI M, JACOB N, GAIGNERIE A, CHARIAU C, DAVID L, FOREST V, MARIONNEAU C, CHARPENTIER F, **LOUSSOUARN G**, LAMIRAULT G, REVERSADE B, ZIBARA K, LEMARCHAND P, GABORIT N. Human model of IRX5 mutations reveals key role for this transcription factor in ventricular conduction. Cardiovasc Res:cvaa259, 2020.

39. MALAK OA, ABDEREMANE-ALI F, WEI Y, COYAN FC, PONTUS G, SHAYA D, MARIONNEAU C, **LOUSSOUARN G**. Up-regulation of voltage-gated sodium channels by peptides mimicking S4-S5 linkers reveals a variation of the ligand-receptor mechanism. Sci Rep. 10(1):5852, 2020.

38. MALAK OA, GLUHOV GS, GRIZEL AV, KUDRYASHOVA KS, SOKOLOVA OS, **LOUSSOUARN G.** Voltage-dependent activation in EAG channels follows a ligand-receptor rather than a mechanical-lever mechanism. J Biol Chem. 294:6506-21, 2019

37. KARLOVA M, VOSKOBOYNIKOVA N, GLUHOV GS, ABRAMOCHKIN D, MALAK OA, MULKIDJANIAN A, **LOUSSOUARN G**, SHAITAN K, STEINHOFF HJ, SOKOLOVA OS. Detergent-free solubilization of human Kv channels, expressed in mammalian cells. Chemistry and Physics of Lipids. 2019:50-57, 2019.

36. MONTNACH J, CHIZELLE FF, BELBACHIR N, CASTRO C, LI L, **LOUSSOUARN G**, TOUMANIANTZ G, CARCOUËT A, MEINZINGER AJ, SHMERLING D, BENITAH JP, GÓMEZ AM, CHARPENTIER F, BARÓ I. Arrhythmias precede cardiomyopathy and remodeling of Ca2+ handling proteins in a novel model of long QT syndrome. *J Mol Cell Cardiol,* 123:13-25*,* 2018.

35. BUREL S, COYAN FC, LORENZINI M, MEYER MR, LICHTI CF, BROWN JH, **LOUSSOUARN G**, CHARPENTIER F, NERBONNE JM, TOWNSEND RR, MAIER LS, MARIONNEAU C. C-terminal phosphorylation of Nav1.5 impairs FGF13-dependent regulation of channel inactivation. *J Biol Chem*. 292:17431-48, 2017.

34. MALAK OA, ES-SALAH-LAMOUREUX Z, **LOUSSOUARN G**. hERG S4-S5 linker acts as a voltage-dependent ligand that binds to the activation gate and locks it in a closed state. Sci Rep. Dec;7:113, 2017.

33. ES-SALAH-LAMOUREUX Z, JOUNI M, MALAK OA, BELBACHIR N, AL SAYED ZR, GANDON-RENARD M, LAMIRAULT G, GAUTHIER C, BARÓ I, CHARPENTIER F, ZIBARA K, LEMARCHAND P, BEAUMELLE B, GABORIT N, **LOUSSOUARN G**. HIV-Tat induces a decrease in i_{KR} and i_{KS} via reduction in phosphatidylinositol-(4,5)-bisphosphate availability. J Mol Cell Cardiol. 99:1-13, 2016.

32. PORTERO V, LE SCOUARNEC S, ES-SALAH-LAMOUREUX Z, BUREL S, GOURRAUD JB, BONNAUD S, LINDENBAUM P, SIMONET F, VIOLLEAU J, BARON E, MOREAU E, SCOTT C, CHATEL S, **LOUSSOUARN G**, O'HARA T, MABO P, DINA C, LE MAREC H, SCHOTT JJ, PROBST V, BARÓ I, MARIONNEAU C, CHARPENTIER F, REDON R. Dysfunction of the voltage-gated k+ channel β2 subunit in a familial case of Brugada syndrome. J Am Heart Assoc. 5(6), 2016.

31. JOUNI M, SI-TAYEB K, ES-SALAH-LAMOUREUX Z, LATYPOVA X, CHAMPON B, CAILLAUD A, RUNGOAT A, CHARPENTIER F, **LOUSSOUARN G**, BARÓ I, ZIBARA K, LEMARCHAND P, GABORIT N. Toward Personalized Medicine: Using Cardiomyocytes Differentiated From Urine-Derived Pluripotent Stem Cells to Recapitulate Electrophysiological Characteristics of Type 2 Long QT Syndrome. *J Am Heart Assoc*. 4(9), 2015.

30. MORENO C, DE LA CRUZLA A, OLIVERAS A, KHARCHE SR, GUIZY M, COMES N, STARÝ T, RONCHI C, ROCCHETTI M, BARÓ I, **LOUSSOUARN G**, ZAZA A, SEVERI S, FELIPE A, VALENZUELA C. Marine n-3 PUFAs modulate IKs gating, channel expression, and location in membrane microdomains. *Cardiovasc Res.* 105:223-32, 2015.

29. BEZIAU DM, BARC J, O'HARA T, LE GLOAN L, AMAROUCH YM, SOLNON A, PAVIN D, LECOINTE S, BOUILLET P, GOURRAUD JB, GUICHENEY P, DENJOY I, REDON R, MABO P, LE MAREC H, **LOUSSOUARN G**, KYNDT F, SCHOTT JJ, PROBST V, BARÓ I. Complex Brugada syndrome inheritance in a family harbouring compound SCN5A and CACNA1C mutations. *Basic Res Cardiol.* 109:446, 2014.

28. COYAN F, ABDEREMANE-ALI F, AMAROUCH MY, PIRON J, MORDEL J, NICOLAS CS, STEENMAN M, MEROT J, MARIONNEAU C, THOMAS A, BRASSEUR R, BARÓ I, **LOUSSOUARN G**. A Long QT Mutation Substitutes Cholesterol for Phosphatidylinositol-4,5-Bisphosphate in KCNQ1 Channel Regulation. PLoS One. 9:e93255, 2014.

27. SHAYA D, FINDEISEN F, ABDEREMANE-ALI F, ARRIGONI C, WONG S, NURVA SR, **LOUSSOUARN G**, MINOR DL, Jr. Structure of a Prokaryotic Sodium Channel Pore Reveals Essential Gating Elements and an Outer Ion Binding Site Common to Eukaryotic Channels. *J Mol Biol.* 426:467-83, 2014.

26. ABDEREMANE-ALI F, ES-SALAH-LAMOUEUX Z, DELEMOTTE L, KASIMOVA MA, LABRO AJ, SNYDERS DJ, FEDIDA D, TAREK M., BARÓ I, **LOUSSOUARN G**. Dual effect of Phosphatidylinositol-4,5-Bisphosphate on Shaker K+ channels. *J Biol Chem* 287:36158-67, 2012.

25. LAURENT G., SAAL S., AMAROUCH M.Y., BEZIAU D.M., MARSMAN R.F.J., FAIVRE L., BARC J., DINA C., BERTAUX G., BARTHEZ O., THAUVIN-ROBINET C., CHARRON P., FRESSART V., MALTRET A., VILLAIN E., BARON E., MEROT J., TURPAULT R., COUDIERE Y., CHARPENTIER F., SCHOTT JJ, **LOUSSOUARN G**., WILDE A., WOLF JE., BARÓ I, KYNDT F., PROBST V. F., Multifocal Ectopic Purkinje-related Premature Contractions: a new SCN5A-related cardiac channelopathy. *J Am Coll Cardiol 60,* 144-156, 2012.

24. LABRO AJ, BOULET IR, CHOVEAU F, MAYEUR E, BRUYNS T, **LOUSSOUARN G**, RAES AL, SNYDERS DJ. The S4-S5 linker of KCNQ1 channels forms a structural scaffold with the S6 segment controlling gate closure. *J Biol Chem.* 286:717-25, 2011.

23. CHOVEAU F, RODRIGUEZ N, ABDEREMANE ALI F, LABRO AJ, ROSE T, DAHIMENE S, BOUDIN H, LE HENAFF C, ESCANDE D, SNYDERS DJ, CHARPENTIER F, MEROT J, BARO I, **LOUSSOUARN G.** KCNQ1 channels voltage dependency through a voltage-dependent binding of the S4-S5 linker to the pore domain. *J Biol Chem.* 286:707-16, 2011.

22. PIRON J, CHOVEAU FS, AMAROUCH MY, RODRIGUEZ N, CHARPENTIER F, MEROT J, BARO I, **LOUSSOUARN G.** KCNE1-KCNQ1 osmoregulation by interaction of phosphatidylinositol-4,5-bisphosphate with Mg2+ and polyamines. *J Physiol*, 588:3471-3483, 2010. IF 4.76 → **Cf aussi "Comments" par N. Gamper in *J Physiol.* 588:3631-2, 2010**

21. RODRIGUEZ N, AMAROUCH MY, MONTNACH J, PIRON J, LABRO AJ, CHARPENTIER F, MEROT J, BARO I, **LOUSSOUARN G.** Phosphatidylinositol-4,5-bisphosphate (PIP_2) stabilizes the open pore conformation of the Kv11.1 (hERG) channel. *Biophysical J*, 99:1110-1118, 2010**.**

20. CHOVEAU FS, EL HARCHI A, RODRIGUEZ N, LOUERAT-ORIOU B, BARÓ I, DEMOLOMBE S, CHARPENTIER F, **LOUSSOUARN G.** Transfer of rolf S3-S4 linker to hERG eliminates activation gating but spares inactivation. *Biophysical J*, 97:1323-1334, 2009.

19. HAISSAGUERRE M, CHATEL S, SACHER F, WEERASOORIYA R, PROBST V, **LOUSSOUARN G,** HORLITZ M, LIERSCH R, SCHULZE-BAHR E, WILDE A, KAAB S, KOSTER J, RUDY Y, LE MAREC H, SCHOTT JJ. Ventricular fibrillation with prominent early repolarization associated with a rare variant of KCNJ8/KATP channel. *J Cardiovasc Electrophysiol* 20:93-8, 2009.

18. PEROZ D, DAHIMENE D, BARÓ I, **LOUSSOUARN G**, MEROT J. LQT1 associated mutations increase KCNQ1 proteasomal degradation independently of derlin-1. *J Biol Chem*. 284:5250-6, 2009.

17. NICOLAS C, PARK KH, EL HARCHI A, CAMONIS J, KASS RS, ESCANDE D, MEROT J, **LOUSSOUARN G**, LE BOUFFANT F, BARÓ I. IKs response to protein kinase A-dependent KCNQ1 phosphorylation requires direct interaction with microtubules. *Cardiovasc Res* 79:427-35, 2008.

16. BAUDOUIN SJ, ANGIBAUD J, **LOUSSOUARN G**, BONNAMAIN V, MATSUURA A, KINEBUCHI M, NAVEILHAN P, BOUDIN H. The signaling adaptor protein CD3zeta is a negative regulator of dendrite development in young neurons. *Mol Biol Cell.* 19:2444-2456, 2008.

15. **LOUSSOUARN G,** MARTON J, NICHOLS CG. Molecular Basis of Inward-rectification: Structural features of the blocker defined by extended polyamine analogs. *Molecular Pharmacology* **68**, 298-304, 2005.

14. PARK KH, PIRON J, DAHIMENE D, MÉROT J, BARÓ I, ESCANDE D, **LOUSSOUARN G**. Impaired KCNQ1/KCNE1 and Phosphatidylinositol-4,5-bisphosphate interaction underlies the Long QT Syndrome. *Circulation Research* **96**, 730-739,2005.

13. ROYER A, DEMOLOMBE S, EL HARCHI A, LE QUANG K, PIRON J, TOUMANIANTZ G, MAZURAIS D, BELLOCQ C, LANDE G, TERRENOIRE C, MOTOIKE HK, CHEVALLIER JC,

LOUSSOUARN G., CLANCY CE, ESCANDE D, CHARPENTIER F. Expression of human ERG K(+) channels in the mouse heart exerts anti-arrhythmic activity. *Cardiovascular Research* **65**, 128-137,2005.

12. KURATA H.T., PHILLIPS L.R., ROSE T., **LOUSSOUARN G.**, HERLITZE S., FRITZENSCHAFT H., ENKVETCHAKUL D., NICHOLS C.G., BAUKROWITZ T. Molecular basis of inward rectification: polyamine interaction sites located by combined channel and ligand mutagenesis. *Journal of General Physiology* **124**,541-554,2004.

11. **LOUSSOUARN G,** PARK KH, BELLOCQ C, BARO I, CHAPENTIER, F, ESCANDE D. Phosphatidylinositol-4,5-bisphosphate, PIP2, Controls KCNQ1/KCNE1 Voltage-gated Potassium Channels: a functional homology between voltage-gated and inward rectifier K+ channels. *EMBO J.* **22**, 5412-21,2003.

10. **LOUSSOUARN G**, PIKE LJ, ASHCROFT FM, MAKHINA EN, NICHOLS CG. Dynamic sensitivity of ATP-sensitive K^+ channels to ATP. *Journal of Biological Chemistry* **276**, 29098-29103, 2001.

9. **LOUSSOUARN G**, ROSE T, PHILLIPS R, MASIA R, NICHOLS CG. Flexibility of the Kir6.2 inward rectifier channel pore. *Proc. Natl. Acad. Sci. USA* **98**,4227-4232, 2001.

8. ENKVETCHAKUL D, **LOUSSOUARN G**, MAKHINA EN, NICHOLS CG. ATP interaction with the open state of the K_{ATP} channels. *Biophysical Journal* **80**,719-728, 2001.

7. GRIBBLE FM., **LOUSSOUARN G**, TUCKER SJ, ZHAO C, NICHOLS C, ASCHCROFT FM. A novel method for measurement of sub-membrane ATP concentration. *Journal of Biological Chemistry* **278**,30046-30049, 2000.

6. ENKVETCHAKUL D, **LOUSSOUARN G**, SHYNG SL, MAKHINA EN, NICHOLS CG. A critical gating transition in K_{ATP} channels: ATP stabilizes a closed-state. *Biophysical Journal* **78**,2334-2348, 2000.

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4. POLLARD H, REMY JS, **LOUSSOUARN G**, DEMOLOMBE S, BEHR JP, ESCANDE D. Polyethylenimine but not cationic lipids promotes transgene nuclear targeting in mammalian cells. *Journal of Biological Chemistry* 273: 7507-7511, 1998.

3. MOHAMMAD-PANAH R, DEMOLOMBE S, RIOCHET D, LEBLAIS V, **LOUSSOUARN G**, POLLARD H, BARÓ I, ESCANDE D. Hyperexpression of recombinant CFTR in heterologous cells alters its physiological properties. *American Journal of Physiology* 274: C310-C318, 1998. IF 3.08

2. **LOUSSOUARN G**, CHARPENTIER F, MOHAMMAD-PANAH R, KUNZELMANN K, BARO I, ESCANDE D. KvLQT1 potassium channel but not Isk is the molecular target for chromanol 293B. *Molecular Pharmacology* 52: 1131-1136, 1997.

1. **LOUSSOUARN G**, DEMOLOMBE S, MOHAMMAD-PANAH R, ESCANDE D, BARÓ I. Expression of CFTR controls cAMP-dependent activation of epithelial K^+ currents. *American Journal of Physiology*, 271: C1565-1573, 1996.

Revues

12. ALAMEH M, OLIVEIRA-MENDES BR, KYNDT F, RIVRON J, DENJOY I, LESAGE F, SCHOTT JJ, DE WAARD M, **LOUSSOUARN G.** A need for exhaustive and standardized characterization of ion channels activity. The case of KV11.1. *Front Physiol.* 14:1132533, 2023

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22. High-throughput technology for channel phenotyping and development of photo-sensitive compounds. Discovery for Ion Channels XXIII Satellite Meeting. San Diego 17 février 2023.

21. Une base de données cliniques pour les troubles du rythme héréditaires. Université de Nantes. 6 octobre 2022.

20. How voltage-sensor movement transfers to gate opening in several voltage-gated channels. Université de Shenzen 6 avril 2022.

19. How voltage-sensor movement transfers to gate opening in several voltage-gated channels. Young Investigator School in Moscow. Université Lomonosov à Moscou, le 13 Novembre 2020

19. Projets COVID-19 de l'institut du thorax. Visite officielle du Ministre de l'enseignement supérieur et de la recherche à Nantes, 22 octobre 2020

18. Opposite effects of the S4–S5 linker and the phospholipid PIP_2 on voltage-gated channel function: KCNQ1, hERG and other channels. Young Investigator School in Nantes. Nantes, IRS-UN, 1 et 2 Juin 2017

17. hERG S4-S5 linker acts as a voltage-dependent ligand that binds to the activation gate and locks it in a closed state. Young Investigator School in Moscow. Université Lomonosov à Moscou, 26 Mai 2016

16. Molecular mechanisms of Kv and Nav voltage dependent gating: a unified model. Workshop "Computational tools to investigate genetic channelopathies", Beatenberg, 10-12 Janvier 2016

15. Canaux sodiques musculaires : vers une nouvelle approche thérapeutique ? Hotel Quintessia, Orvault, 21 Septembre 2015

14. Mécanismes moléculaires de dépendance au potentiel des canaux potassiques et sodiques, Institut du Cerveau et de la Moelle, 14 Novembre 2014.

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