

# Liste des publications

## PUBLICATIONS

### 📄 Preprint

2021

1. Wang, S., Zhang, M., Wu, S., Du, S., Qian, W., Chen, J., Qiao, L., Yang, Y., Tan, J., **Navarro, N.**, Tang, K., Ruiz-Linares, A., Claes, P., Jin, L., Li, J. (2021). Genetic mechanisms underlying East Asian and European Facial differentiation. Research square preprint DOI: [10.21203/rs.3.rs-604881/v1](https://doi.org/10.21203/rs.3.rs-604881/v1)

### 📄 Articles dans des revues internationales à comité de lecture

2021

2. Bonfante, B., Faux, P., **Navarro, N.**, Mendoza-Revilla, J., **Dubied, M.**, Montillot, C., Wentworth, E., Poloni, L., **Varón-González, C.**, et al [45 auteurs] (2021). A GWAS in Latin Americans identifies novel face shape loci, implicating VPS13B and a Denisovan introgressed region in facial variation. *Sciences Advances* 7: eabc6160 DOI: [10.1126/sciadv.abc6160](https://doi.org/10.1126/sciadv.abc6160)
3. **Dubied, M.**, Montuire, S., **Navarro, N.** (2021). Commonalities and evolutionary divergences of mandible shape ontogenies in rodents. *Journal of Evolutionary Biology* DOI: [10.1111/jeb.13920](https://doi.org/10.1111/jeb.13920)
4. Jablonska, A., **Navarro, N.**, Laffont, R., Wattier, R., Pešić, V., Zawal, A., Vukić, J., Grabowski, M. (2021). An integrative approach challenges species hypotheses and provides hints for evolutionary history of two Mediterranean freshwater palaemonid shrimps (Decapoda: Caridea). *The European Zoological Journal* 88: 900-924 DOI: [10.1080/24750263.2021.1953624](https://doi.org/10.1080/24750263.2021.1953624)
5. Rolland, T., Monna, F., Magail, J., Esin, Y., **Navarro, N.**, Wilczek, J., Gantulga, J.-O., Chateau-Smith, C. (2021). Documenting carved stones from 3D models. Part II—Ambient occlusion to reveal carved parts *Journal of Cultural Heritage Volume* 49: 28-37 DOI: [10.1016/j.culher.2021.03.006](https://doi.org/10.1016/j.culher.2021.03.006)
6. Wilczek, J., Monna, F., **Navarro, N.**, Chateau-Smith, C. (2021). A computer tool to identify best matches for pottery fragments. *Journal of Archaeological Science: Reports* 37: 102891 DOI: [10.1016/j.jasrep.2021.102891](https://doi.org/10.1016/j.jasrep.2021.102891)

2020

7. Fabri-Ruiz, F., Danis, B., **Navarro, N.**, Koubbi, P., Laffont, R., Saucède, T. (2020). Benthic ecoregionalization based on echinoid fauna of the Southern Ocean supports current proposals of Antarctic marine protected areas under IPCC scenarios of climate change. *Global Change Biology* 26: 2161-2180. DOI: [10.1111/gcb.14988](https://doi.org/10.1111/gcb.14988)
8. FabriRuiz, S., **Navarro, N.**, Laffont, R., Danis, B., Saucède, T. (2020). Diversity of Antarctic echinoids and ecoregions of the Southern Ocean. *Biology Bulletin* 47: 683-698. DOI: [10.1134/S1062359020060047](https://doi.org/10.1134/S1062359020060047)
9. Lkebir, N., Rolland, T., Monna, F., Masrour, M., Bouchaou, L., Fara, E., **Navarro, N.**, Wilczek, J., Beraaouz, E.H., Chateau Smith, C., Pérez-Lorente, F. (2020). Anza palaeoichnological site, Late Cretaceous, Morocco. Part III: Comparison between traditional and photogrammetric records. *Journal of African Earth Sciences* 172: 103985. DOI: [10.1016/j.jafrearsci.2020.103985](https://doi.org/10.1016/j.jafrearsci.2020.103985)
10. Monna, F., Magail, J., Rolland, T., **Navarro, N.**, Wilczek, J., Gantulga, J.-O., Esin, Y., Granjon, L., Allard, A.-C., Chateau Smith, C. (2020). Machine learning for rapid mapping of archaeological structures made of dry stones - Example of burial monuments from the Khirgisuur culture, Mongolia. *Journal of Cultural Heritage* 48: 118-128. DOI: [10.1016/j.culher.2020.01.002](https://doi.org/10.1016/j.culher.2020.01.002)

2019

11. Monna, F., **Navarro, N.**, Magail, J., Guillon, R., Rolland, T., Wilczek, J., Esin, Y., Chateau, C. (2019). Contextualization of archaeological information using augmented photospheres, viewed with Head-Mounted displays. *Sustainability* 11: 3894. DOI: [10.3390/su11143894](https://doi.org/10.3390/su11143894)
12. Montuire, S., Royer, A., Lemanik, A., Gilg, O., Sokolova, N., Sokolov, A., Desclaux, E., Nadachowski, A., **Navarro, N.** (2019). Molar shape differentiation during range expansions of the collared lemming (*Dicrostonyx torquatus*) related to past climate changes. *Quaternary Science Reviews* 221: 105886. DOI: [10.1016/j.quascirev.2019.105886](https://doi.org/10.1016/j.quascirev.2019.105886)
13. Morris, J., **Navarro, N.**, Rastas, P., Rawlins, L.D., Sammy, J.S., Mallet, J. and Dasmahapatra, K.K. (2019) The genetic architecture of adaptation: convergence and pleiotropy in *Heliconius* wing pattern evolution. *Heredity* 123: 138-152. DOI: [10.1038/s41437-018-0180-0](https://doi.org/10.1038/s41437-018-0180-0)
14. Oudot, M., Neige, N., Laffont, R., **Navarro, N.**, Khaldi, A.Y., Cronier, C. (2019) Functional integration for enrollment constrains evolutionary variation of Phacopidae trilobites despite developmental modularity. *Palaeontology* 62: 805-821. DOI: [10.1111/pala.12428](https://doi.org/10.1111/pala.12428)
15. **Varón-González, C.**, Pallares, L.F., Debat, V. and **Navarro, N.** (2019) Mouse skull mean shape and shape robustness rely on different genetic architectures and different loci. *Frontiers in Genetics* 10: 64. DOI: [10.3389/fgene.2019.00064](https://doi.org/10.3389/fgene.2019.00064)

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16. **Varón-González, C.** and **Navarro, N.** (2019) Epistasis regulates developmental stability of the mouse craniofacial shape. *Heredity* 122: 501-512. DOI: [10.1038/s41437-018-0140-8](https://doi.org/10.1038/s41437-018-0140-8)

## 2018

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17. Monna, F., Esin, Y., Magail, J., Granjon, L., **Navarro, N.**, Wilczek, J., Saligny, L., Couette, S., Dumontet, A., and Chateau C. (2018). Documenting carved stones by 3D modelling – Example of Mongolian deer stones. *Journal of Cultural Heritage* 34: 116-128. DOI: [10.1016/j.culher.2018.04.021](https://doi.org/10.1016/j.culher.2018.04.021)
18. **Navarro, N.** and Maga, A.M. (2018) Genetic mapping of molar size relations identifies inhibitory locus for third molars in mice. *Heredity* 121: 1-11. Cover and feature Podcast. DOI: [10.1038/s41437-017-0033-2](https://doi.org/10.1038/s41437-017-0033-2)
19. **Navarro, N.**, Montuire, S., Laffont, R., Steimetz, E., Onofrei, C., and Royer, A. (2018) Identifying past remains of morphologically similar vole species using molar shapes. *Quaternary* 1: 0020. DOI: [10.3390/quat1030020](https://doi.org/10.3390/quat1030020)
20. **Wilczek, J.**, Monna, F., Jebrane, A., Labruere-Chazal, C., **Navarro, N.**, Couette, S., Chateau Smith, C. (2018) Computer-assisted orientation and drawing of archaeological pottery. *Journal on Computing and Cultural Heritage* 11: 1-17. DOI: [10.1145/3230672](https://doi.org/10.1145/3230672)

## 2017

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21. Khimoun, A., Peterman, W., Eraud, C., Faivre, B., **Navarro, N.**, and Garnier, S. (2017). Landscape genetic analyses reveal fine-scale effects of forest fragmentation in an insular tropical bird. *Molecular Ecology* 26: 4906-4919. DOI: [10.1111/mec.14233](https://doi.org/10.1111/mec.14233)
22. Monna, F., Marques, A. N. Jr., Guillon, R., Losno, R., Couette, S., **Navarro, N.**, Dongarra, G., Tamburo, E., Varrica, D., Chateau, C., Nepomuceno, F.O. (2017) Perturbation vectors to evaluate air quality using lichens and bromeliads. A Brazilian case study. *Environmental Monitoring and Assessment* 189: 566. DOI: [10.1007/s10661-017-6280-0](https://doi.org/10.1007/s10661-017-6280-0)

## 2016

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23. **Navarro, N.**, and Maga, A.M. (2016) Does 3D phenotyping yield substantial insights in the genetics of the mouse mandible shape? *G3 – Genes, Genomes, Genetics* 6: 1153-1163. DOI: [10.1534/g3.115.024372](https://doi.org/10.1534/g3.115.024372)

## 2015

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24. Maga, A.M., **Navarro, N.**, Cunningham, M.C. and Cox, T.C (2015). Quantitative trait loci affecting the 3D skull shape and size in mouse and prioritization of candidate genes in-silico. *Frontiers in Physiology* 6: 92. DOI: [10.3389/fphys.2015.00092](https://doi.org/10.3389/fphys.2015.00092)
25. Huber, B., Whibley, A., Le Poul, Y., **Navarro, N.**, Martin, A., Baxter, S., Shah, A., Gilles, B., Wirth, T., McMillan, W.O. and Joron, M. (2015). Conservatism and novelty in the genetic architecture of adaptation in *Heliconius* butterflies. *Heredity* 114: 515-524. DOI: [10.1038/hdy.2015.22](https://doi.org/10.1038/hdy.2015.22)
26. **Calandra, I.**, **Labonne, G.**, Mathieu, O., Henttonen, H., Leveque, J., Milloux, M.-J., Renvoise, E., Montuire, S. and **Navarro, N.** (2015). Isotopic partitioning by small mammals in the subnivium. *Ecology and Evolution* 5: 4132-4140. DOI: [10.1002/ece3.1653](https://doi.org/10.1002/ece3.1653)
27. **Wilczek, J.**, Monna, F., Gabillot, M., **Navarro, N.**, Rusch, L., and Chateau, C. (2015). Unsupervised model-based clustering for typological classification of Middle Bronze Age flanged axes. *Journal of Archaeological Science: Reports* 3: 381-391. DOI: [10.1016/j.jasrep.2015.06.030](https://doi.org/10.1016/j.jasrep.2015.06.030)

## 2014

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28. Arnoux, E., Eraud, C., **Navarro, N.**, Tougard, C., Thomas, A., Cavallo, F., Vetter, N., Faivre, B. and Garnier, S. (2014). High levels of phenotypic and genetic differentiation at a very small geographic scale in a bird species, the forest thrush *Turdus lherminieri*. *Heredity* 113: 514- 525. DOI: [10.1038/hdy.2014.56](https://doi.org/10.1038/hdy.2014.56)
29. **Labonne, G.**, **Navarro, N.**, Laffont, R., and Montuire S. (2014). Developmental integration in a functional unit: deciphering processes from adult dental morphology. *Evolution and Development* 16: 224-232. DOI: [10.1111/ede.12085](https://doi.org/10.1111/ede.12085)
30. Guigue, J., Mathieu, O., Leveque, J., Mounier, S., Laffont, R., Maron, P.-A., **Navarro, N.**, Chateau, C., Amiotte-Suchet, P., and Lucas, Y. (2014). A comparison of extraction procedures for water-extractable organic matter in soils. *European Journal of Soil Science* 65: 520-530. DOI: [10.1111/ejss.12156](https://doi.org/10.1111/ejss.12156)
31. **Wilczek, J.**, Monna, F., Barral, P., Burlet, L., Chateau, C., and **Navarro, N.** (2014). Morphometrics of second Iron Age ceramics: strength, weakness, and comparison with traditional typology. *Journal of Archaeological Science* 50: 39-50. DOI: [10.1016/j.jas.2014.05.033](https://doi.org/10.1016/j.jas.2014.05.033)

## 2012

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32. **Labonne, G.**, Laffont, R., Renvoisé, E., Jebrane, A., Labruere, C., Chateau-Smith, C., **Navarro, N.**, Montuire S. (2012). When less means more: evolutionary and developmental hypotheses in rodent molars. *Journal of Evolutionary Biology* 25: 2102-2111. DOI: [10.1111/j.1420-9101.2012.02587.x](https://doi.org/10.1111/j.1420-9101.2012.02587.x)

# Liste des publications

## Période de thèse et postdocs

33. Debat, V., Bloyer, S., Faradji, F., Gidaszewski, N., **Navarro, N.**, Orozco-terWengel, P., Ribeiro, V., Schlötterer, C., Deutsch, J.S. and Peronnet, F. (2011). Developmental Stability: A Major Role for Cyclin G in *Drosophila melanogaster*. *PLoS Genetics* 7: e1002314. DOI: [10.1371/journal.pgen.1002314](https://doi.org/10.1371/journal.pgen.1002314)
34. Yang, B., **Navarro, N.**, Noguera, J.L., Muñoz, M., Guo, T.F., Yang, K.X., Ma, J.W., Folch, J.M., Huang, L.S. and M. Pérez-Enciso. (2011). Building phenotype networks to improve QTL detection: A comparative analysis of fatty acid and fat traits in pigs. *Journal of Animal Breeding and Genetics* 128: 329–343. DOI: [10.1111/j.1439-0388.2011.00928.x](https://doi.org/10.1111/j.1439-0388.2011.00928.x)
35. Ledur, M.C., **Navarro, N.**, and M. Pérez-Enciso. (2010). Large scale SNP genotyping in crosses between outbred lines: How useful is it? *Heredity* 105: 173-182. DOI: [10.1038/hdy.2009.149](https://doi.org/10.1038/hdy.2009.149)
36. Laffont, R., Renvoisé, E., **Navarro, N.**, Alibert, P. and Montuire, S. (2009). Morphological modularity and assessment of developmental processes within the vole dental row (*Microtus arvalis*, Arvicolinae, Rodentia). *Evolution and Development* 11: 302-311. DOI: [10.1111/j.1525-142X.2009.00332.x](https://doi.org/10.1111/j.1525-142X.2009.00332.x)
37. Ledur, M.C., **Navarro, N.** and Pérez-Enciso, M. (2009, co-1st author). Data modeling as a main source of discrepancies in single and multiple marker association methods. *BMC Proceedings* 3(Suppl. 1): S9. DOI: [10.1186/1753-6561-3-S1-S9](https://doi.org/10.1186/1753-6561-3-S1-S9)
38. Lefebvre, B., Eble, G.J., **Navarro, N.** and David, B. (2006). Diversification of atypical Paleozoic echinoderms: A quantitative survey of stylophoran disparity, diversity, and geography. *Paleobiology* 32: 483-508. DOI: [10.1666/0094-8373\(2006\)32\(483:DOAPEA\)2.0.CO;2](https://doi.org/10.1666/0094-8373(2006)32(483:DOAPEA)2.0.CO;2)
39. Navarro, N. (2005). Incorporating  $\delta^{18}\text{O}$  values of past waters in the calibration of radiocarbon dating. *Geology* 33: 369-372. DOI: [10.1130/G21222.1](https://doi.org/10.1130/G21222.1)
40. **Navarro, N.**, Neige, P. and Marchand, D. (2005). Biological invasions as a source of morphological constraints and novelties? The diversification of the early Cardioceratidae (Ammonoidea; Middle Jurassic). *Paleobiology* 32: 98-116. DOI: [10.1666/0094-8373\(2005\)031<0098:FIAASO>2.0.CO;2](https://doi.org/10.1666/0094-8373(2005)031<0098:FIAASO>2.0.CO;2)
41. **Navarro, N.**, Lécuyer, C., Montuire, S., Langlois, C. and Martineau, F. (2004). Oxygen isotope compositions of phosphate from arvicoline teeth and Quaternary climatic changes, Gigny, French Jura. *Quaternary Research* 6: 172-182. DOI: [10.1016/j.yqres.2004.06.001](https://doi.org/10.1016/j.yqres.2004.06.001)
42. **Navarro, N.**, Zatarain, X. and Montuire, S. (2004). Effects of morphometric descriptor changes on statistical classification and morphospaces. *Biological Journal of the Linnean Society* 83: 243-260. DOI: [10.1111/j.1095-8312.2004.00385.x](https://doi.org/10.1111/j.1095-8312.2004.00385.x)
43. Semlali, R. M., Dessogne, J.-B., Monna, F., Bolte, J., Azimi, S., **Navarro, N.**, Denaix, L., Loubet, M., Chateau and van Oort, F. (2004). Modeling lead input and output in soils using lead isotopic geochemistry. *Environmental Science & Technology* 38: 1513-1521. DOI: [10.1021/es0341384](https://doi.org/10.1021/es0341384)
44. Villier, L. and **Navarro, N.** (2004). Biodiversity dynamics and their driving factors during the Cretaceous diversification of Spatangoidea (Echinoidea, Echinodermata). *Palaeogeography, Palaeoclimatology, Palaeoecology*, 214: 265-282. DOI: [10.1016/j.palaeo.2004.06.019](https://doi.org/10.1016/j.palaeo.2004.06.019)
45. **Navarro, N.** (2003). MDA: a MATLAB-based program for morphospace-disparity analysis. *Computers & Geosciences*, 29: 655-664. DOI: [10.1016/S0098-3004\(03\)00043-8](https://doi.org/10.1016/S0098-3004(03)00043-8)

## 📖 Chapitre d'ouvrage

46. Klingenberg, C.P. and **Navarro, N.** (2012). Development and genetics of the mouse mandible: a model system for complex morphological structures. In: Macholan et al. (eds.), *Evolution of the House Mouse*. Cambridge Series in Morphology and Molecules.

## 📖 Actes de colloques

47. Varón-González, C., **Navarro, N.** (2018) Disentangling directional and fluctuating asymmetry in a genome-wide association study. In: *Geometric morphometrics. Trends in Biology, Paleobiology and Archeology*, Rissech et al. (eds), Monografies del SERP, Barcelona, pp. 117-124.
48. Gabillot, M., Monna, F., Alibert, P., Bohard, B., Camizuli, E., Dommergues, C.-H., Dumontet, A., Forel, B., Gerber, S., Jebrane, A., Laffont, R., **Navarro, N.**, Specht, M., Chateau, C. (2017). Productions en serie vers 1500 avant notre ere ; notions de regles de fabrication au Bronze moyen (environ 1500 avant J.-C.) entre la Manche et les Alpes. In: Mordant C. and Wirth, S. (eds.) *Normes et variabilités au sein de la culture matérielle des sociétés de l'âge du Bronze, Scéances de la Societe de Prehistoire Francaise*, 10: 19-31.
49. **Navarro, N.**, Klingenberg, C.P. (2007). Mapping multiple QTLs of geometric shape of the mouse mandible. In S. Barber, P.D. Baxter and K.V. Mardia (eds), *Systems Biology and Statistical Bioinformatics*, p. 125-128. Leeds, Leeds University Press.

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50. **Navarro, N.** , Klingenberg, C.P. (2006). Combining geometric morphometrics and genomic data: The genetics of mouse mandible shape. In S. Barber, P.D. Baxter, K.V. Mardia and R.E. Walls (eds), *Interdisciplinary Statistics and Bioinformatics* , p. 63-66. Leeds, Leeds University Press.

## 🔗 Résumés de colloques publiés

51. **Dubied, M.**, Montuire, S., **Navarro, N.** (2019) Dynamics of the Postnatal Skull Disparities in Rodents. *Journal of Morphology* 280: S110-S111.
52. **Navarro, N.** , Klingenberg, C.P. (2007) Genetic architecture of the mandible shape: Insights from fine mapping QTLs in a heterogeneous stock of mice. *Journal of Morphology* 268: 111-111.

## LOGICIELS

### 🔗 Packages distribués sous 🌐

- Laffont, R. and **Navarro, N.** 2018. `digit3Dland` : package R pour la digitalisation 3D
- **Navarro, N.** 2015. `shapeQTL` : package R pour la cartographie de locus de traits multivariés

### 🔗 Packages publiés

- Wilczek et al. 2018. `DACCORD` : package R pour l'alignement et le dessin des céramiques
- **Navarro, N.** 2003. `MDA`: programme `Matlab` pour l'analyse de la disparité