



## Dr. Louise Cheynel

**Postdoctoral Research Associate – LEHNA, University Lyon 1, France.**

**Honorary Association – IVES, University of Liverpool, UK.**

<https://cheynellouise.wixsite.com/louisecheynel-1>

<https://scholar.google.com/citations?user=8585aboAAAAJ&hl=fr>

Nationality : French. Age : 31.

### Eco-immunology; microbiome; wildlife health; life-history traits.

#### Academic Background

04/01/2016 – 03/01/2019 : **PhD in Eco-physiology and Evolutionary Biology.** University of Lyon, France.

01/10/2016 – 01/07/2017 : **University Degree in Evolutionary Biology and Medicine.** University of Lyon, France. Obtained with honours (rank : 1/9). *Thesis: Allergic diseases and the Hygiene Hypothesis.*

01/10/2014 – 01/07/2015 : **MSc Degree in Integrative Physiology in Extreme Environments.** Lyon 1 University, France. Obtained with honours (rank: 1/12).

01/10/2013 – 01/07/2014 : **MSc (1st year) in Animal and Human behaviour.** Rennes 1 University, France. Obtained with honours (rank: 6/97).

01/10/2010 – 01/07/2013 : **BSc Degree in Physiology** (Lyon 1 University, France).

#### Formation in Animal Experimentation and Ethics

- Formation *Effects of environmental conditions on animal models & ethics*, University of Lyon. (France, 2022)
- UK Home Office Personal Licensee Training (PIL) - rodent. Modules E1/L (Ethics and legislation) and PIL AB (Basic biology, animal handling and welfare), University of Liverpool. (UK, 2019)
- Diploma Animal Experimentation and Ethics, level B1, CNRS. (France, 2016)

#### Scientific Research Experience

03/10/2022 – 31/05/2024 : **Post-Doctoral Research Associate** (University of Lyon, France).  
*Effects of anthropic pollutions (light, noise) on immunity and microbiome in the common toad.*

01/06/2019 – 02/10/2022 : **Post-Doctoral Research Associate** (Liverpool University, UK).  
*Relationships between immunity, genetics and microbiome in natural populations of house mice.*

04/01/2016 – 03/01/2019 : **PhD in Eco-physiology and Evolutionary Biology** (University of Lyon, France). *Age-specific relationships between immunity and life-history traits in a wild mammal, the roe deer.*

03/01/2015 – 30/06/2015 : **Internship in Eco-physiology** (University of Lyon, France). *The free radical theory of ageing: energetic metabolism and oxidative stress of the cave isopod Proasellus.*

01/05/2014 – 30/06/2014 : **Internship in Behavioural Ecology (University of Lyon, France).** *Are the sexual signals of the male tree frogs an indicator of their hunting capacities?*

## Awards and Grants

2023. **FR3728 BIOENVIS Grant “Biodiversity, Water, Environment, City, Health”, Lyon 1 Univ.** (10 k€).  
2023. **LEHNA Project Starting Grant**, MAF pole (2,000€).  
2017. **Best Oral Communication Students’ Award**, Conference CEPA, Strasbourg, France (300€).  
2017. **Travel Grant, Conference CEPA**, Strasbourg, France (200€).  
2017. **Travel Grant, Conference** on Telomere Dynamics, Leverhulme Trust, Edinburgh, UK (500€).  
2016. **Travel Grant, Conference** on Telomere Dynamics, Leverhulme Trust, Edinburgh, UK (500€).  
2016/2019. **PhD Fellowship from the CNRS**, France (65k€).

## Responsibilities in the Scientific Community and Public Visibility

### Current Responsibilities

- British Ecological Society (BES) – **Committee Member and Newsletter Editor** of the Special Interest Group “Parasites & Pathogens”, 350 readers. (UK, since 2022)
- BES – **Review College member**, grant applications assessment. (UK, since 2023)
- BES – **Communication representative** of the new Network EDGE for Gender-related issues. (UK, 2023, in creation)
- **Postdoc representative** at the unit board, laboratory LEHNA UMR 5023. (since 01/2023)

### Public Visibility of my Profile

- **Guest Speaker** at the Conference “Vaccination, immunity: the One Health approach”  
Public event organized by French Newspaper L'Obs & 1Health, 16 June 2023, Lyon City Hall, France. Replay: <https://www.1seulesante.fr/edition2023/online-session/5569610f-0911-ee11-907a-002248859577>
- **Guest speaker** at public Conference #ScienceSandwich at CREA Mont-Blanc, Research Center for Alpine Ecosystems, 28 November 2023, Chamonix, France.
- **Online Interview Video** for French Vet magazine La Semaine Vétérinaire, June 2023.  
Presentation of Eco-immunology: <https://www.youtube.com/watch?v=ZhHrRgqQBuo&t=3s>
- **Interview** for Le Projet Pangolin (French Scientific media lead by Early Career Researchers on Instagram - 1,500 followers), October 2023 for an edition on Women in Ecology.
- **Article** “Vaccination, protection of the Biodiversity” published in L'Obs French Newspaper, N°3063-22/06/2023 pages 60-61.

### Active Role in Conference Organisation

- Organiser of the *SFE<sup>2</sup> Sfecologie 2024* Conference. (France, 2024)
- Organiser of the SIG "Parasites and Pathogens" social event at the *2023 Annual Meeting of the British Ecological Society*. (UK, 2023)
- Organiser of the network EDGE (Gender-related issues) social event at the *2023 Annual Meeting of the British Ecological Society*. (UK, 2023)
- Jury for student talks in sessions "Parasites Pathogens or Wildlife Disease" at the *2022 Annual Meeting of the British Ecological Society*. (UK, 2022)
- Chairperson at the *Annual Meeting of the IVES department*, Liverpool University. (UK, 2022)

### Teaching and students supervision

2022/2025 : Supervision for one PhD chapter (Léa Dasque, University of Lyon and IRSN, France).

2023 : Supervision MSc student (O. Perret, University of Lyon, France).

2023: Practical Courses on oxidative stress (15 hours, 2<sup>nd</sup> MSc year, University of Lyon).

2023 : Guest lectures in Eco-immunology (10 hours, 1<sup>st</sup> MSc/3<sup>rd</sup> BSc yrs, University of Lyon, Fr).

2023: Guest lectures on Senescence (5 hours, 1<sup>st</sup> MSc year, University of Lyon).

2023 : Guest lecture on "Animal" (10 hours, ESACM Art School, Clermont-Ferrand, France).

2023: Supervision of MScs and PhD students on the toad fieldwork (University of Lyon, France).

2019/2022 : Supervision for one PhD chapter (S. Hunter-Barnett, University of Liverpool, UK).

2018 : Co-supervision MSc student (G. Buffelan, University of Lyon, France)

2016-2019 : Supervision volunteers on roe deer captures fieldwork (Trois-Fontaines, France).

### Main collaborations

**Prof M. Viney, Prof J. Hurst** (University of Liverpool, UK): Eco-immunology, microbiome of mice.

**Prof E. Riley** (University of Edinburgh, UK): Immunogenetics of wild mice.

**Dr J.-F. Lemaître, Dr. J.-M. Gaillard** (University of Lyon, France): Senescence in wild roe deer.

**Prof E. Gilot-Fromont, Dr E. Ramery** (VetagroSup/University of Lyon, Fr): Wildlife eco-immunology.

**Prof D.H. Nussey** (University of Edinburgh, UK): Telomere dynamic in roe deer.

**Prof A. Cohen** (University of Sherbrooke, Canada): Physiological dysregulations of ageing in deer.

**Prof N. Mondy, Dr. J. Secondi, Dr. T. Lengagne** (University of Lyon, France) : Anthropic stress, wetlands, amphibian ecology and physiology, conservation.

**Dr A. Stier** (Strasbourg University, France): Telomere dynamic in the common toad.

## Scientific publications

9 published articles, Google Scholar (07/09/2023) : 131 citations, H-index = 5

9 - M. Viney & **L. Cheynel** (2023) Gut immune responses and evolution of the gut microbiome – a hypothesis. *Discovery Immunology Special Collection on Ecoimmunology*, in press.

8 - **L. Cheynel**, L. Lazarou, E. Riley & M. Viney (2023) The genetics of immune and infection phenotypes in wild mice, *Mus musculus domesticus*. *Molecular Ecology*, 32, 4242–4258.

7 - **L. Cheynel**, E. Gilot-Fromont, B. Rey, E. Quéméré, F. Débias, J. Duhayer, S. Pardonnet, M. Pellerin, J-M. Gaillard & J-F. Lemaître (2021). Maternal effects shape offspring physiological condition but do not senesce in a wild mammal. *Journal of Evolutionary Biology*, 34: 661-670. (3 citations)

6 - J-F. Lemaître, J. Carbillet, B. Rey, R. Palme, H. Froy, R.V. Wilbourn, S.L. Underwood, **L. Cheynel**, J-M. Gaillard, A.J.M. Hewison, H. Verheyden, F. Débias, J. Duhayer, C. Régis, S. Pardonnet, M. Pellerin, D.H. Nussey & E. Gilot-Fromont (2021). Short-term telomere dynamics is associated with glucocorticoid levels in wild populations of roe deer. *Comparative Biochemistry and Physiology Part A: Molecular & Integrative Physiology*, 252, 110836. (9 citations)

5 - J-F. Lemaître, **L. Cheynel**, M. Douhard, V. Ronget & J-M. Gaillard (2020) Trade-offs. In: Rattan, S.I.S. (Ed.), *Encyclopedia of Biomedical Gerontology*. Elsevier. vol. 3, Academic Press, pp. 367–375. (2 citations)

4 - **L. Cheynel**, F. Douhard, E. Gilot-Fromont, B. Rey, F. Débias, S. Pardonnet, J. Carbillet, H. Verheyden, A.J.M. Hewison, M. Pellerin, J-M. Gaillard & J-F. Lemaître (2019) Does body growth impair immune function in a large herbivore? *Oecologia*, DOI: 10.1007/s00442-018-4310-4. (5 citations)

3 - J-F. Lemaître, **L. Cheynel**, F. Douhard, G. Bourgoïn, F. Débias, H. Ferté, E. Gilot-Fromont, S. Pardonnet, M. Pellerin, B. Rey, C. Vanpé, M. Hewison & J-M. Gaillard (2018) The influence of early-life allocation to antlers on male performance during adulthood: evidence from contrasted population of a large herbivore. *Journal of Animal Ecology*, 87:921–932. (24 citations)

2 - **L. Cheynel**, J-F. Lemaître, J-M. Gaillard, B. Rey, G. Bourgoïn, H. Ferté, M. Jégo, F. Débias, M. Pellerin, L. Jacob & E. Gilot-Fromont (2017) Immunosenescence patterns differ between populations but not between sexes in a long-lived mammal. *Scientific Reports*, 7: 13700. (51 citations)

1 - R.V. Wilbourn, H. Froy, M.-C. McManus, **L. Cheynel**, J.-M. Gaillard, E. Gilot-Fromont, C. Régis, B. Rey, M. Pellerin, J.-F. Lemaître & D.H. Nussey (2017) Age-dependent associations between telomere length and environmental conditions in roe deer. *Biology Letters*, 13(9):20170434. (36 citations)

### In preparation

- **L. Cheynel**, S. Hunter-Barnett, J. Hurst & M. Viney. Immunity and gut microbiome composition in natural populations of house mice. *In Prep*.
- **L. Cheynel**, A. Dumet, E. Gilot-Fromont, B. Rey, E. Ramery, C. Régis, J. Secondi, T. Lengagne & N. Mondy. Effect of Artificial Light At Night on immunity of common toads from natural populations. *In prep*.

## Presentations in international conferences

**16 - Annual meeting of the British Ecological Society, December 2023 (Belfast, UK) – Poster.**

*Effect of ALAN on immunity of common toads from natural populations.*

**15 - Conference EVOLYON, November 2023 (Lyon, France) - Poster**

*Effect of ALAN on immunity of common toads from natural populations.*

**14 - Conference of Animal Ecophysiology, November 2023 (Tours, France) - Oral Presentation**

*Effect of ALAN on immunity of common toads from natural populations.*

**13 - Meeting of the GDR CNRS RESHAPE, September 2023 (Marseille, France) - Flash presentation**

*Actuality of research: effect of ALAN on immunity of common toads from natural populations.*

**12 - Annual meeting of the British Ecological Society, December 2021 (Liverpool, UK) - Poster**

*Immunogenetic variation and infection phenotypes in wild mouse populations.*

**11 - Annual meeting of the British Ecological Society, December 2020 (online) - Oral Presentation**

*The microbiome of wild mice, *Mus musculus domesticus*.*

**10 - Annual meeting of the LABEX ECOFECT, May 2019 (Lyon, France) - Oral Presentation**

*Immune senescence in two populations of a wild mammal, the roe deer.*

**9 - Annual meeting of The Evolutionary Demography Society, January 2018 (Lyon, France) – Poster**

*Patterns of immunosenescence differ between two contrasted populations of a long-lived mammal.*

**8 - Conference of Animal Ecophysiology, November 2017 (Strasbourg, France) - Oral Presentation**

*Senescence, immune competence and telomere length in a wild mammal. Price of best oral communication.*

**7 - International Conference on Telomere Dynamics, October 2017 (Edinburgh, UK) - Oral Presentation**

*Age-dependent associations between telomere length and environmental conditions in a wild mammal.*

**6 - Meeting of the REID, September 2017 (Montpellier, France) - Oral Presentation**

*Immuno-senescence patterns in two populations of a long-lived mammal.*

**5 - Annual meeting of the LABEX ECOFECT, March 2017 (Lyon, France) - Poster**

*Patterns of immunosenescence differ between two contrasted populations of a long-lived mammal.*

**4 - Annual meeting of the British Ecological Society, December 2016 (Liverpool, UK) - Poster**

*Patterns of immunosenescence differ between two contrasted populations of a long-lived mammal.*

**3 - Forum of Health Sciences LABEX in Auvergne-Rhône-Alpes, December 2016 (Lyon, France) – Poster**

*Patterns of immunosenescence differ between two contrasted populations of a long-lived mammal.*

**2 - International Conference on Telomere Dynamics, October 2016 (Edinburgh, UK) - Oral Presentation**

*Patterns of immunosenescence differ between two contrasted populations of a long-lived mammal.*

**1 - Conference of Animal Ecophysiology, October 2015 (La Rochelle, France) - Poster**

*The free radical theory of aging: energetic metabolism and oxidative stress of the cave isopod *Proasellus*.*