

Emilie Roger, Pharm.D, Ph.D



CURRENT POSITION

-Associate Professor of Pharmaceutical technology, Faculty of Health, Department of Pharmacy, University of Angers, France

WEBSITES

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SCOPUS Author ID <https://www.scopus.com/authid/detail.uri?authorId=27467728000>

Google Scholar: <https://scholar.google.gr/citations?hl=en&user=Vsa8A9cAAAAJ>

PubMed: <https://pubmed.ncbi.nlm.nih.gov/?term=Roger+E>

PERSONAL

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EDUCATION / AFFILIATIONS /POSTS

2006: State diploma of Doctor in Pharmacy (Graded with honors), **University of Angers, FRA.**

2006: Master's degree in physicochemistry, formulation, vectorization, and production of Health products, **University of Paris XI, FRA.**

2008: Diploma of animal experimentation (level 1), **National Veterinary School of Nantes, FRA.**

2009: PhD in experimental and clinical pharmacology, **University of Angers, FRA.**

2010: Post-doctoral researcher, team of Dr. J. Panyam, pharmaceutical department, **University of Minnesota, USA**

2010-2013: Assistant professor in Pharmaceutical Technology, UMR 7199 CNRS, CAMB Laboratory, **University of Strasbourg, FRA**

2013-2019: Assistant professor in Pharmaceutical Technology, Faculty of Health, Department of Pharmacy, Inserm U1066, CNRS 6021, MINT Laboratory, **University of Angers, FRA.**

2019: HDR "habilitation thesis to supervise research", **University of Angers, FRA.**

2019 - Associate professor in Pharmaceutical Technology, Faculty of Health, Department of Pharmacy, Inserm U1066, CNRS 6021, MINT Laboratory, **University of Angers, FRA.**

2023 - Junior Member of the **Institut Universitaire de France** (IUF, Academic institute of France)

RESEARCH ACTIVITIES

- **Nanomedicines** for Controlled/Targeted Drug Delivery.
- Nanoparticles for **oral delivery**:
- Improving Drug Pharmacokinetics through **Advanced Drug Delivery System (Lipid nanocapsules)** Design.
- Design Advanced Drug Delivery System without solvent for **Bioactive** agents (peptides).

- Design Nanomedicines for **cancer therapy** (intravenous, local, nasale administration)

PARTICIPATION IN RESEARCH PROJECTS-FUNDING

Project coordinator and/or PI supported by national and international funding agencies. (i) local actions (Scientific Council of the University of Angers, Agence Loire Métropole, SATT West valorization), (ii) calls for projects from charity associations (Ligue contre le Cancer), (iii) international actions (Joint Call of 7th European Framework Program for Research and Technological Development (FP7), Erasmus Mundus Joint master's degree (EMJMD)).

TEACHING ACTIVITIES

(2010-) *Undergraduate*

Pharmaceutical Technology, Biopharmaceutic, Pre-Formulation/Design and control;

Preparation of Drug Formulations.

(2013-) *Postgraduate*

Biopharmaceutics and Pharmacokinetics, Pharmaceutical Technology; Innovative NanoFormulations, Advanced Drug Delivery Systems, Novel Drug Delivery Systems; non-clinical evaluations (*in vitro* and *in vivo* models)

Preparation of Drug Formulations and preparation of lipid nanoparticle Formulations.

Invited Teacher

Oral drug delivery, Diploma of University of University of Paris Saclay (2019 -)

Nanomedicines in cancerology, in master's degree in engineering of National Veterinary School of Nantes, France (2018-2022)

Nanomedicines and oral drug delivery, in master's degree of University Joseph KI-Zerbo, Burkina Faso (2015 -)

Nanomedicines applications, in master's degree of University La Rochelle, France (2023)

PRIZES-HONORS

2009. Cover of Journal of Controlled Release, 140

2010. Research Fellowship, University of Minnesota, Minneapolis, USA.

2011: Thesis award "Science of medicine" from the French Academy of Pharmacy

2018 Award for scientific research (Prime d'encadrement Doctoral et Recherche (PEDR)) (global notation B), FRA

2022 Award for Scientific Research (PEDR) (global notation A), FRA

2023. Advancement to the grade of Maître de conférences hors classe by the National Academic Council

2023. Appointed as Junior Member of the Institut Universitaire de France (IUF, Academic institute of France)

CONFERENCE ORGANIZATION

President of Organizing Committee: 4th International Workshop on Nanomedicines, EMJMD NANOMED, Angers. July (2021)

Member of Organizing and scientific Committee: Translational Nanomedicine, Angers, **2014**, 7th Annual meeting SFnano, **2021**.

PROFESSIONAL AFFILIATIONS

- AFEPG (Association Francophone des Enseignants de Pharmacie Galénique)
- APGI/APV (Association de Pharmacie Galénique Industrielle)
- Controlled Release Society (CRS)
- CRS -BeNeLux&France Chapter

PROFESSIONAL ACTIVITIES

Editorial activities:

Referee for Journal of Controlled Release, International Journal of Pharmaceutics, Acta Biomaterials, Current Medicine Chemistry, , etc.

Associate editor, Frontiers in Medical Technology (2022-)

Member of Committees:

Co-responsible of master's degree "NanoPharma" (Nanomedicines and R&D Pharmaceutic), University of Angers, France (2013-), Member of the working group "use of nanomaterials" Inserm (France), Coordinated by the INSERM technological watch and risk assessment mission (2014 -), Elected member of unit board of the MINT Laboratory (2014 -), Co-responsible of delocalized master's degree "NanoPharma" (Nanomedicines and R&D Pharmaceutic) in Vietnam, Mekong Pharma, Pierre Fabre Association (2016-2018), elected member of the Federative Research Structure Cellular Interactions and Therapeutic Applications (SFR ICAT 4208) of the University of Angers (2017 – 2019), Responsible of the thematic axe 'Epithelium and Endothelium Passage' of MINT Laboratory, France (2017-2021), Co-coordinator of the Early Career Scientists Committee (ECSC), of the CRS BeNeLux & France (2021 – 2023), Member of the board of the Biology-Health doctoral school, Pays de la Loire, France (2022 -), Elected member of the committee of Pharmacy department, France (2023 -)

PATENTS

- holder, nanomedicine formulation, **WO/2011/036234**: Lipid nanocapsules, process for their preparation and their use as medicines filing date 24/09/2010, (discontinued in January 2017)
- Co-owner, process of formulation, **WO2021014109**: Continous method for nano-emulsification by concentration phase inversion A1, filing date 24/06/2020

PUBLICATIONS (GENERAL)

36 papers peer-reviewed journals, 3 chapters in books, 2 patents, 42 Abstracts in proceeding of National & International conferences, 1 World patent, and 1 French patents discontinued in 2017. Participation in > 50 International conferences/workshops;

Invited speaker in 4 National and International scientific meetings/workshops/conferences.

METRICS (January 11, 2024)

Google Scholar 26 cited documents: **Citations** 2479 (all), 1196 (since 2019); **h-index**: 21 (all), 19 (since 2019); **i10-index**: 23 (all), 22 (since 2019);

Scopus 36 cited documents: **Citations**: 2060; **h-index**: 21

10 REPRESENTATIVE PUBLICATIONS

1. LEBRETON V., KAEOKHAMLOED N., VASYALAKI A., HILAIRET G., MELLINGER A., BEJAUD J., SAULNIER P., LAGARCE F., GATTACCECA F., LEGEAY S. AND **ROGER E.**, "Pharmacokinetics of intact lipid nanocapsules using new quantitative FRET technique" Journal of Controlled Release. **2022**, November 2022, vol. 351, pages 681-691. <https://doi.org/10.1016/j.jconrel.2022.09.057> [**IF 10.8**].
2. KAEOKHAMLOED N., LEGEAY S. AND **ROGER E.**, "FRET as the tool for in vivo nanomedicine tracking" Journal of Controlled Release. **2022**, September 2022, vol. 349, pages 156-173 <https://doi.org/10.1016/j.jconrel.2022.06.048> [**IF 10.8**].

3. KAEOKHAMLOED N., **ROGER E.**, BÉJAUD J., LAUTRAM N., MANERO F., PERROT R., ABBARA C., BRIET M. AND LEGEAY S. "New In Vitro Coculture Model for Evaluating Intestinal Absorption of Different Lipid Nanocapsules" *Pharmaceutics* **2021**, 13, 595. <https://doi.org/10.3390/pharmaceutics13050595> [IF 5.4].
4. F. DUMAS, J.-B. BENOIT, P. SAULNIER, **E. ROGER**, "A new method to prepare microparticles based on an Aqueous Two-Phase system (ATPS), without organic solvents" *Journal of Colloid and Interface Science*, **2021**, 599, 642-649. <https://doi.org/10.1016/j.jcis.2021.03.141> [IF 9.9].
5. BRIOT T., **ROGER E.**, HAIDAR N.-B., BEJAUD J., LAUTRAM N., GUILLET C., THEPOT S., LEGEAY, S., LAGARCE F. « Di-O-lauroyl-decibaine-lipid nanocapsules: towards extending decibaine activity" *International Journal of Nanomedicine* ». *International Journal of Nanomedicine*. **2019**. Vol. 14 p. 2091-2102 <https://doi.org/10.2147/ijn.s190482> [IF 8].
6. **ROGER E.**, GIMEL J. - C., BENSLEY C., KLYMCHENKO A. S., BENOÎT J. - P. « Lipid nanocapsules maintain full integrity after crossing a human intestinal epithelium model ». *Journal of Controlled Release*. **2017**. Vol. 253 p. 11-18 <https://doi.org/10.1016/j.jconrel.2017.03.005> [IF 10.8].
7. REISCH A., **ROGER E.**, PHOEUUNG T., ANTHEAUME C., ORTHLIEB C., BOULMEDAIS F., LAVALLE P., SCHLENOFF J. B., FRISCH B., SCHAAP P. « On the Benefits of Rubbing Salt in the Cut: Self-Healing of Saloplastic PAA/PAH Compact Polyelectrolyte Complexes ». *Advanced Materials*. **2014**. Vol. 26 n°16 p. 2547–2551 <https://doi.org/10.1002/adma.201304991> [IF 29.9].
8. SWAMINATHAN S., **ROGER E.**, TOTI U., NIU L., OHLFEST J. R., PANYAM J. « CD133-targeted paclitaxel delivery inhibits local tumor recurrence in a mouse model of breast cancer ». *Journal of Controlled Release*. **2013**. Vol. 171, n°3. <https://doi.org/10.1016/j.jconrel.2013.07.014> [IF 10.8].
9. **ROGER E.**, LAGARCE F., GARCION E., BENOÎT J. - P. « Biopharmaceutical parameters to consider in order to alter the fate of nanocarriers after oral delivery. ». *Nanomedicine*. **2010**. Vol. 5 n°2 p. 287-306. <https://doi.org/10.2217/nmm.09.110> [IF 5.5].
10. **ROGER E.**, LAGARCE F., GARCION E., BENOÎT J. - P. « Lipid nanocarriers improve paclitaxel transport throughout human intestinal epithelial cells by using vesicle-mediated transcytosis ». *Journal of Controlled Release*. **2009**. Vol. 140 n°2 p. 174-81 <https://doi.org/10.1016/j.jconrel.2009.08.010>; [IF 10.8].

MENTORING -MAJOR CONTRIBUTIONS TO THE EARLY CAREERS OF RESEARCHERS

I have mentored/supervised:

- 3 completed Pharmacy Student Diploma Theses
- 12 Master Theses (and 1 running is currently running)
- 4 PhDs (and 2 are currently running)
- 1 Post-Doc Researcher

I was jury/member of advisory committees :

- Jury member of 3 students Doctor of Pharmacy (PharmD)
- Jury member of 6 PhD defenses
- Member of 5 PhDs advisory committees