

# Aude-Valerie Jung

## *Current situation:*

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**Lecturer in Chemistry / Environmental Science** since 2007 at the School of Environmental Engineering (EME) of Rennes - **Research Associate at Laboratory Studies and Research in Environmental Health (LERES)** School of Advanced Studies in Public Health in Rennes (35) Research Institute of Environmental and occupational health (**U UMR 1085**) since 2009

## *Professional Experience:*

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### 2006 - 2007 Engineer prevention "chemical hazards"

- **Creation of databases** of simplified data sheets, job descriptions chemicals used by member companies
- **Chemical risk assessment in business:** INRS methodology, protocols metrology developed in cooperation with analytical laboratories
- **Advice for occupational physicians and businesses** (Health, safety, environment, toxicology)
- **Technological and legislative monitoring** (Reach Health Plans, Environment and Health at Work)
- **Supervision of trainees** (Master I Environmental Toxicology Metz) **training** provided to doctors, technical assistants, **conferences** (Project of writing pads public)

## *Qualifications and training:*

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### Diplomas

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| <b>2004</b> | <b>Doctor of Geosciences (Interaction with organic matter and micro pollutants during operations become water treatment by coagulation)</b> Environment and Mineral Laboratory, UMR CNRS 7569, <i>National Polytechnic Institute of Lorraine (INPL)</i> |
| <b>2001</b> | <b>Chemical Engineer (specialty "health, safety and environment")</b> <i>Ecole Nationale Supérieure de Chimie de Mulhouse (ENSCMu)</i>  |

### Professional courses and other training

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| <b>2013</b> | <b>Open innovation</b> identify international networks of experts on your R & D projects, <i>Techniques of Engineering Sciences, Paris</i><br><b>Socotec REACH and chemical risks</b> , Socotec Cesson-Sevigne<br><b>"Project management" basic certificate</b> <i>First MOOC of France (Massive Open Online Course), Ecole Centrale Lille</i> |
| <b>2012</b> | <b>Manage and monitor its classified facilities (ICPE)</b> <i>Techniques of Engineering Sciences, Paris</i>  |
| <b>2010</b> | <b>New labeling CLP / GHS chemicals</b> <i>Techniques of Engineering Sciences, Paris</i>   |
| <b>2007</b> | <b>Conduct a series of samples of atmosphere</b> , <i>National Institute of Safety Research (INRS), Nancy</i>  |
| <b>2007</b> | <b>The biological risk</b> <i>National Institute of Safety Research (INRS), Paris</i>  |

**2006      Technical Enablement professional as a speaker in Occupational Risk Prevention (IPRP) Alsace-Moselle inter-regional college CARSAT**

## **Lecturer CNU qualifications**

Section 31 CNU

### *Teaching activities and teaching engineering*

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#### **Education**

##### Teaching activities during

General Chemistry, 1st year engineering cycle, during 14h, 10h TD  
Organic Chemistry, 2nd year engineering cycle, during 16h, 10h TD  
Characterization of Water and Wastewater, 3rd year engineering cycle, 20h TP  
Occupational health and safety, 4th year engineering cycle, during 10h, 6h  
Occupational health and safety, Bachelor in Project Management environment during 10h, 6h  
Installations classified for environmental protection (ICPE), 4th year cycle engineer, 6h  
Installations classified for environmental protection (ICPE), Bachelor, during 2h, 6h  
Samples of surface water, the fifth year cycle engineer, 4h TP  
BPI / REACH: 10h instruction in English, "International Comparative sustainable development laws" module *Master of Science in Eco-Design and sustainable management, Ecole Supérieure de Commerce de Rennes*  
Conferences 1st, 2nd, 5th year (6h): Environmental Health, REACH, Characterization of organic matter spectroscopy

##### Activities of previous lessons:

Toxicology, degree of professional specialized study (LIFO) during 4h, 6h (2007-2012)  
Toxicology applied to buildings, degree of professional specialized study (LIFO, during 4h (2010)  
Solution chemistry (pH-metry complexometry-redox), 1st year preparatory cycle integrated over 16h, 10h TD (2008)  
Characterization of Water and Wastewater, Diploma specialized professional study (LIFO, (2007-2010), during 4h, 4h TD, 8 am PT  
Ecotoxicology, 4th year engineering cycle, during 6h, 4h TD (2007-2009)  
Process Engineering / Technical and membrane distillation, 4th year cycle engineer, 6h course, 6h (2007-2009)  
REACH fifth year engineering students and students of the Graduate School of Business (common teaching in the course Eco-Management) (2010-2013)

##### Activities prior teachings given in other institutions:

Occupational health and safety / BPI, 4th year Graduate School of Industrial Logistics (ESLI, Redon) during 14h, 7h TD (2008-2010)  
Vacations TP Driver sand filtration, 4th year National School of Geology (ENSG, Nancy), 4h TP (2003-2004)  
Characterization of natural organic matter, the fourth year National School of Geology (ENSG, Nancy), 3h course (2003-2004)

#### **Engineering**

Creating modules "safety / prevention company" ICPE and fourth year engineering students

#### **Educational responsibility**

Head first year engineering students (2008-2009)  
Responsible for the work of engineering, 5th year engineering students (since 2011)

## Mentoring activities

> **Co-supervision of thesis and participation in thesis supervision** (Director: Thomas O., LERES-EHESP) **PhD (Doctoral School Life-Agri-Health, University of Rennes 1)**

1. Causse J. (2012-15) Project Green Algae, co Coop West France
2. Delpla I. (2008-11) Contribution to the assessment of the impact of climate change on the quality of water intended for human consumption within the European project "ERA-Environment and Health." **Thesis committee December 16, 2011**

> **Supervision of project engineering (5th year engineering cycle EME)**

**2009** *Development of an impact assessment method applied to discharges from ships, NACRE project (Ship conducted in accordance with the environment)*

**2010** *Assessment of environmental impacts of discharges from ships, OPAL project  
Establishment of a security system at work on the building of the EME*

**2011** *Methods of comparative environmental analysis of discharges from ships, OPAL project*

**2012:** *Environmental gain, final results PEARL project*

**2013 :** *Identification of risk situations of microbial contamination, ISIS project  
Energy audit of the building of the ECAM*

> **Supervision of student projects "bibliography", 3rd year cycle engineer EME**

> **Frames of placement students (4th and 5th year engineering cycle EME)**

## Research Activities

### Participation in research projects and partnerships

1. Environment change and rising DOC trends: implications for public health (CCWQ). Environment and Health ERA-NET program (FP7). Partners U. Bangor (UK), U. Utrecht (NL), CEH (UK), Handles, 2009-2012, Research Associate, European meeting:
  - JUNG A.-V., DELPLA I., BAURES E., THOMAS W., Final results Regarding DOC characterization with UV / Visible spectroscopy, January 9-10th 2013 in London, United Kingdom
  - JUNG A.-V., DELPLA I., BAURES E., THOMAS O., UV / Visible spectroscopy indexes to Characterize organic matter, February 7-8th 2012 in Windermere, United Kingdom.
  - JUNG A.-V., DELPLA I., BAURES E., THOMAS O., Climate change and NOM characterization by UV / Visible spectroscopy, May 2011 in Saint-Malo, France.
  - JUNG A.-V., DELPLA I., BAURES E., THOMAS O., NOM characterization by UV / Visible spectroscopy, September, 2010 in Utrecht University, Netherland.
  - JUNG A.-V., DELPLA I., BAURES E. THOMAS O. Impacts of Heavy Rainfalls events on runoff water in an agricultural area: application of UV / Visible Spectroscopy, February, 2010 in Bangor University, United Kingdom.
2. Coop de France West, Impact of emerging factors in the transfer of nutrients throughout a watershed pilot CIFRE, 2012-2015, co-bordering thesis
3. Oracle, objectify the Risk and the Emergence of cyanobacteria toxins in Water Resources, in partnership with Frederick Pitois (SARL Limnology, Rennes), 2012-2015, 2011 IS APR HANDLES, research associate, co-flanking 2 M1 trainees

4. Implementation of genotoxicity test for employees of the waste, Cooperative Research Network on Waste (RECORD), a partner with Lawrence Olivier and Fardel Verhnet (INSERM U620-SeRAIC) 2008-2009 RECORD

### Coordination of research projects and partnerships

5. PEARL (ship Conduit for the Respect of the Environment), Pôle Mer Bretagne, 2007-2013, project scientist for EME
6. Substitution of carcinogens, mutagens and reproductive toxins, DCNS Brest, consultant expertise, 2008-2009

### Training of highly qualified personnel

Co-bordering thesis Jean Causse (2012-2015) Impact of emerging factors in the transfer of nutrients throughout a watershed pilot CIFRE, under the direction of Olivier Thomas.

Participation in thesis supervision Ianis Depla (2008-2011) Contribution to the assessment of the impact of climate change on the quality of water intended for human consumption, defended on 16 December 2011, under the direction of Olivier Thomas.

Co-supervision of engineering students in the second year of research projects:

- Aurélie Fuchez, 2013 objectify the risk of the occurrence of cyanobacteria: establishing a rapid diagnosis
- Caroline Farenc, 2012 objectify the risk of the occurrence of cyanobacteria study statistics (ORACLE project)

### Scientific Production

#### ACL

BAURES E. DELPLA I., MEREL S. **A. JUNG-V.**, Pétavy F., CLEMENT M., THOMAS O., 2013, Variation of organic carbon - nitrate relationship with hydrologic diet of river, Journal of Hydrology, 6, 477, 86-93.

**A. JUNG-V.**, CHANUDET V. LARTIGES BS GHANBAJA J. ABDELMOULA M. Bersillon JL, 2012. Association of iron oligomeric species with natural organic matter: a combined EELS and Mössbauer investigations. Aquatic Sciences, 74, 769-779.

B. Roig, I. DELPLA, BAURES E. **JUNG A.-V.**, THOMAS O., 2011, Analytical issues for drinking water contamination monitoring related to short term intense rainy events. Trends in Analytical Chemistry, 30, 8, 1243-1251.

DELPLA I., BAURES E. **A. JUNG-V.**, THOMAS W., 2011, Impact of rainfall events on runoff water quality in an agricultural environment in temperate areas, Science of the Total Environment, 409, 1683-1688.

DELPLA I., BAURES E. **JUNG A.-V.**, Mr. CLEMENT, THOMAS O., 2011, Issues of drinking water quality of small scale water services: towards climate change, Water Science and Technology, 63, 2, 227-232.

**JUNG A.-V.**, FROCHOT C., Villieras F. LARTIGES BS PARANT S. VIRIOT M.-L., Bersillon JL, 2010, Interaction of pyrene FluoroProbe with natural and synthetic humic substances: Examining the local molecular organization from photophysical and interfacial processes, Chemosphere, 80, 228-234.

DELPLA I., **A. JUNG-V.**, BAURES E., CLEMENT M., THOMAS O., 2009, Impacts of climate exchange area on water quality in relation to drinking water production Environment International, 35, 8, 1225-1233.

**A. JUNG-V.**, FROCHOT C., S. Parant, LARTIGES BS VIRIOT M.-L., C. Selve, Bersillon JL, 2005, Synthesis of amino-phenolic humic-like substances and comparison with natural river-extracted humic acids: a technical multi-analytical approach, Organic Geochemistry, 36, 9, 1252-1271.

**A. JUNG-V.**, CHANUDET V. GHANBAJA J. LARTIGES BS Bersillon JL, 2005, Coagulation of humic substances and Dissolved organic matter with a ferric salt: an Electron Energy Loss Spectroscopy investigation, Water Research, 39, 16, 3849 -3862.

#### ACLN

Pétavy F. **JUNG A.-V.**, Jalal H., 2009, Wastewater Treatment ships, Recent Advances in Process Engineering 98, SFGP Ed, Paris, 6pp.

FARDEL O. VERNHET L. **A. JUNG-V.**, NEW V. LEGRAND-LORANS A., 2009, Use of genotoxicity tests for monitoring the exposure of workers in the processing industry and recycling, RECORD Study Final Report (Cooperative Research Network on waste) No 07-0667/1A, 163 pp.

FARDEL O. VERNHET L. **A. JUNG-V.**, NEW V. LEGRAND-LORANS A., 2008, Use of genotoxicity tests for monitoring the exposure of workers in the processing industry and recycling, interim report RECORD study (Cooperative Research Network on waste) No 07-0667/1A, 151 pp.

#### OS

B. Roig, BAURES E. **A. JUNG-V.**, DELPLA I., THOMAS O., 2012, Rainfall and water quality. Rainfall in: Behavior, Forecasting and Distribution, Published by Nova Science Publishers, Inc.

#### C-ACTI

BAURES E. PITOIS F. **A. JUNG-V.**, THOMAS O., 2013 ORACLE Objectivizing cyanobacteria-associated Risks in recreational waters. 7th International Conference on Sustainable Water Resources Management-May 21st-23rd, New Forest, United Kingdom.

DELPLA I., S. MEREL, BAURES E. **A. JUNG-V.**, Pétavy F., CLEMENT M., THOMAS W., 2011, Surface water quality and climate change issues: impact of hydrology and temperature total organic carbon and nitrate in small scale water services on. SETAC Europe - May 15th-19th, Milan, Italy.

BAURES E DELPLA I, **A. JUNG-V.**, CLEMENT M, THOMAS O. Issues of drinking water quality of small scale water services: towards climate change. IWA World Water Congress and Exhibition, Montreal (Canada), 19-24 September, 2010

DELPLA I., BAURES E. **A. JUNG-V.**, THOMAS W., 2010, Water quality in Small Scale Water Services and climate change issues, SETAC Europe - May 23rd-27th, Seville, Spain.

**A. JUNG-V.**, FROCHOT C., S. Parant, LARTIGES BS VIRIOT M.-L., C. Selve, Bersillon JL, 2003, Interactions of anthropogenic micropollutants with models of humic substances, the fifth symposium on organic matter natural / (International Humic Substances Society) French group IHSS - March 26th-28th, Aubière, France

**JUNG A.-V.**, FROCHOT C., S. Parant, LARTIGES BS VIRIOT M.-L., C. Selve, Bersillon JL, 2003, Relations between natural organic matter and micropollutants Symposium Wire Water-March 10th-12th, 2003, Nancy, France.

#### C-AFF

**JUNG A.-V.**, DELPLA I., THOMAS O., E. BAURES, climate change and quality of drinking water: the resource by-products of disinfection. Health Environment National Congress - December 14-15, 2011, Paris, France.

DELPLA I., BAURES E. **A. JUNG-V.**, THOMAS O., 2011, A new approach for assessment of chlorination by products formation potential from surface of water. Environmental health conference - February 6th-9th, Salvador, Brazil.

DELPLA I., BAURES E. **JUNG A.V.**, THOMAS O., 2010, Impacts of typical rainfall events on runoff water quality in an agricultural area. European Doctoral College on Environment and Health (EHESP) - June 7th-11th, Rennes (France).

DELPLA I., BAURES E. **JUNG A.V.**, THOMAS O., 2010, Impacts of typical rainfall events on runoff water quality in an agricultural area. Days Hotel Dieu (EHESP) - January, 20th, Rennes (France).

DELPLA I., BAURES E. **A. JUNG-V.**, THOMAS O., 2010, Impacts of climate change on coastal areas: expected trends on area and coastal water quality, 1st International Conference on Environmental Pollution, Restoration, and Management SETAC Asia Pacific Joint Center - 1st-5th, Ho Chi Minh City, Vietnam.

FROCHOT C., **A. JUNG-V.**, NEW C., VIRIOT M.-L., 2006, Fluorescence spectroscopy as a characterization tool to study systems in organization or in biological media solutions, IVth International Conference on tracers and tracing methods - 3rd-5th October, Austrans / Grenoble, France.

**A. JUNG-V.**, CHANUDET V. GHANBAJA J. LARTIGES BS Montargès-PELLETIER E. Bersillon JL, 2003. Coagulation of Natural Organic Matter with ferric salts: a TEM-EDX-EELS investigation, European Science Foundation (ESF)-5th-2003 9 thOctober Acquafredda di Maretea, Naples, Italy.

**A. JUNG-V.**, FROCHOT C., KAZPARD V. LARTIGES BS-Montargès E. PELLETIER, VIRIOT M.-L., Bersillon JL, 2002, Removal of synthetic humic macromolecules by aluminum-based coagulant species: a pyrene fluorescence investigation, XIXth IUPAC Symposium on photochemistry-14th-19th July, Budapest

## C-COM

DELPLA I., BAURES E. **A. JUNG-V.**, Monteith D., C. FREEMAN, THOMAS W., 2011, Environmental and rising exchange DOC trends: Impacts on drinking water quality, ACQWA workshop on science and data gaps in EU climate change and water-related projects, Riederalp, Switzerland.

DELPLA I., BAURES E. **A. JUNG-V.**, THOMAS W., 2011, Impact of climatic events on area and drinking water quality in rural area: health risk assessment and adaptation tool for water supply, meetings of the Hotel Dieu (EHESP), Paris, 12-13 May 2011.

**A. JUNG-V.**, FARDEL O., 2010, Development of genotoxicity tests for employees of the waste, Day of Restitution RECORD (with committee and restricted acts), EDF / GDF, Paris, France.

FARDEL O. VERNHET L. **JUNG A.-V.**, NEW V. LEGRAND-LORANS A. Use of genotoxicity tests for monitoring the exposure of workers in the processing industry and recycling, Final report RECORD: January 8th, 2009 in Paris (ADEME)

FARDEL O. VERNHET L. **JUNG A.-V.**, NEW V. LEGRAND-LORANS A. Use of genotoxicity tests for monitoring the exposure of workers in the processing industry and recycling, Presentation of interim report RECORD: June 12th 2008 in Paris (ADEME)

**JUNG A.-V.**, 2008, Regulations and Methodology for Assessing Chemical, Technical Day RECORD, School of Crafts Environment, Bruz, France.

## VAL

**JUNG A.-V.**, C. MARCHAND, MEDEF, October 12th 2006 in Nancy (France) - Hazardous Chemicals

**JUNG A.-V.**, Congress Primary Health Insurance Fund (CPAM), April 13th 2006 in Nancy (France) - Risk CMR and chemical risk assessment in the workplace.

**A. JUNG-V.**, Graduate School Seminar RP22: January 15th, In 2004 Nancy (France) - Interactions of organic matter with anthropogenic micropollutants and become operational during clotting

**JUNG A.-V.**, FROCHOT C., S. Parant, LARTIGES BS VIRIOT M.-L., C. Selve, Bersillon JL, Seminar Workshop Area Moselle: February 3rd, In 2004 Metz (France) - Interactions of organic matter with anthropogenic micropollutants and become operational during clotting

**JUNG A.-V.**, FROCHOT C., S. Parant, LARTIGES BS VIRIOT M.-L., C. Selve, Bersillon JL, Seminar Workshop Moselle area (regional environmental project for transport, pollution remediation and safety studies for water quality distribution Nancy (Moselle River)) October 10, In 2002 Mirecourt (France) - Interactions and transport of anthropogenic micropollutants the Moselle basin by natural organic matter / Study on model substances dissolved in the compartment

**JUNG A.-V.**, Seminary Graduate School of Lorraine (Doc'Lor): November 12th-17th In 2002 La Bresse (France) - Interactions of organic matter with anthropogenic micropollutants



**JUNG A.-V.**, FROCHOT C., LARTIGES BS VIRIOT M.-L., Bersillon JL, Pollutec 2002, Lyon-water purification and removal of organic matter by coagulation iron salt

#### AP

**A. JUNG-V.**, 2009 Substitution of mutagenic and carcinogenic (CMR) for reproduction for DCNS Brest, Final Report EME / DCNS study, 231 pp.

Pétavy F. **A. JUNG-V.**, Jalal H., 2009, Synthesis bibliographic waste ships, Pôle Mer Bretagne, PEARL project, DCNS Brest, 10 pp.

FARDEL O. VERNHET L. **A. JUNG-V.**, NEW V. LEGRAND-LORANS A., 2009, Use of genotoxicity tests for monitoring the exposure of workers in the processing industry and recycling, RECORD Study (Cooperative Research Network on Waste) No. 07-0667/1A, 163 pp.

**JUNG A.-V.**, THOMAS M.-F., 2012, Final Report and financial activity, Shell, PROJECT labeled by the cluster VALORIAL, Brittany region, 15 pp.

**JUNG A.-V.**, THOMAS M.-F., 2012, final implementation report, Pearl Project, Pôle Mer Bretagne / Single Interministerial Fund, pp. 34.

#### *Research contracts, contracts with the socio-economic world and subsidies*

ORACLE No. 11-115, 2013 Project funded under the NRP IS, objectify the risk of the occurrence of cyanobacteria toxins in water resources, Interim Report, pp. 8.

ERA-ENVHEALTH CSA, 2012, Coordination Action Grant agreement number 219337, P7-ENV-2007-CSA-1.2.3-01 HANDLES call, Final report, *Environmental Change and Rising Trends DOC*, 18 pp.

ERA-ENVHEALTH CSA, 2011, Coordination Action Grant agreement number 219337, P7-ENV-2007-CSA-1.2.3-01 HANDLES call, Second intermediate report, *Environmental Change and Rising Trends DOC*, 14 pp.

ERA-ENVHEALTH CSA 2010 Coordination Action Grant agreement number 219337, P7-ENV-2007-CSA-1.2.3-01 HANDLES call, First Intermediate report, *Environmental Change and Rising Trends DOC*, 23 pp.

#### **Seminars**

Co-organizer and participant in the Technical Day of the Cooperative Research Network on Waste (RECORD), 2008, School of Crafts Environment Using genotoxicity tests for monitoring the exposure of workers in the industry treatment and recycling of waste

Organizing for EME "Encounters of the Unpleasant" (*Development of LERES-EME-SAUR-Institute of Vilaine*) Since 2010, treatment plant water Drezet, Férel (56)



## Other activities

**Since 2007:** participation in meetings College of Graduate Studies for Sustainable Development (CHEDD) forming executives and leaders in sustainable development

**2007-2009:** contribution Cooperative Research Network on Waste (RECORD) as part of a technical study, technical organization and participation in the day-day annual return of the network

**2007-2013 :** Participation in the competitiveness cluster Pôle Mer Bretagne through a technical study (ship designed in Respect of the Environment, Pearl project) and participation in general meetings of the Pole

**Since 2013 :** - Working water / metrology Eco-origin network (cluster of eco-activities in the service of Breton companies to meet the challenges of the green economy), coaching students for making posters (crossroads of water Rennes)

- reflection workshops "to teach health and safety at work in higher education institutions" with Britain CARSAT

**2013 :** Participation workshop Research Day 5th national meetings of sustainable development of the Conference of Grandes Ecoles (CGE)

**Reviewer** several articles in international journals (*Chemical Engineering Journal*, *Global Environmental Change* ...)

## Other responsibilities

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### Administrative responsibilities

- Board member of laboratory LERES
- Participation in development tips and advice from life EME
- Educational director of engineering (5th year engineering cycle EME): Exploration and development of agreements between companies and public laboratories and private research, monitoring services performed by students in partner organization of the day with members of restitution external jury in EME (companies, councils, chambers of commerce and industry)

### Other activities

- Participation in job interviews students in middle schools, engineer, Bachelor selection input to major engineering schools (E3A) competition
- Representation of EME student lounges and open days
- Participation workshop "energy audit" organized by consulting firms (CERUR, Audiar) on the building of the EME
- Animation "water treatment" stand in the village of Science Festival (Rennes)
- Participation in workshops "Britain Mobility Augmented" BMA Campus Ker Lann, project initiated by Novincie (CCI Rennes-Bretagne), with 40 companies and Breton Communities and accompanied by ADEME in the framework of the "car of the future"

### *Responses to calls for projects*

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- **ANR Eco-TS, 2013: ISIS Project** Identifying Situations rISk of microbial contamination in water (partnership SAUR LERES, IAV, EME) - A noted, not funded by the Scientific Council
- **Call HANDLES project, 2012: ISIS Project** Identifying Situations rISk of microbial contamination in water (LERES, partnership EME) - A noted, not funded by the Scientific Council
- **ANR JCJC, 2011: Project Turb'eau** Effects of turbid flood of the physico-chemical quality of surface waters used for drinking water production: a study of colloidal micro-relationships (partnership LERES, Ecole des Mines d'Ales, EME) - rated B
- **Call RECORD project, 2009: Mixture of pollutants and toxicity** (partnership INSERM U620, EME)