

**D<sup>r</sup> Thierry Astruc** (Ph. Research Engineer (Food Scientist))

Team "Imaging and Transferts"

Research Unit "Quality of Animal Products"

INRA Auvergne-Rhône-Alpes, Site de Theix (France)

Tel: +33 (0) 4-73-62-41-56

Mobile: +33 (0) 6-65 60 45 59

e-mail: [Thierry.Astruc@inra.fr](mailto:Thierry.Astruc@inra.fr)



### Academic

**1983-1987:** graduate studies in cell biology

**1989:** Master in Food Science, University of Clermont-Ferrand II (France)

**2001:** PhD in Life Sciences and Health, Specialty "Food Science". University of Clermont-Ferrand II (France)  
*"Effect of temperature and catecholamines on the glycolytic metabolism of oxygenated or anoxic isolated muscle." University Thesis conducted at the "Meat Research Station" INRA Clermont-Ferrand-Theix.*

**2010:** Accreditation to Supervise Research, University of Clermont-Ferrand II (HDR degree, required to supervise Thesis).

### Experience

**Since 1993:** Engineer in the Unit "Quality of Animal Products" (eg meat research station) INRA Clermont-Ferrand-Theix (France).

**1993-2005:** Cytologist-biochemist-physiologist. *Effect of pre-slaughter stress on the evolution of postmortem muscle metabolism and meat quality*

**2005-** : Leader of the "microcopy /imaging" group of the "Imaging and Transferts" team

### Research programme

Evolution of the micro-structure and composition of meat and meat products along technological processes and deconstruction of meat products during gastric digestion. Link with technological and nutritional qualities.

Keywords: Skeletal muscle biology, meat science and technology, organoleptic, technological and nutritional meat qualities.

Methods: Histology, Spectroscopy and Micro-spectroscopy (infrared, fluorescence, Raman, X-ray fluorescence), Transmission and Scanning electron microscopy, X-ray microanalysis. Synchrotron beamline.

### **Recent research projects**

**2009-2013:** Participant in a E. U. integrated Project “ Design and development of REAListic food Models with well-characterised micro- and macro-structure and composition” (DREAM project). (supervisor of two Engineer).

**2012-2014:** Coordinator of a collaborative project (Programme Hubert Curien) with L. Kaur and M. Boland from the Riddet Institute (New Zealand) “Impact of processes on meat products digestibility”.  
**2016 - :** new collaboration with the same research group, co-supervisor of a Ph.D student (Feng Ming Chian)

**2012-2016:** Co-coordinator of a project with industry. “Quality of gelatin”. Co-supervisor of a Ph.D student (A. Duconseille).

**2014-2017:** Participant in a French Government project “Toward offering healthy food products better adapted to elderly people” (Alimassens project).

**2015-2017:** Manager of a collaborative project with NARO Institute (Japan): How food structure affects digestibility? Visualization of hydrolytic enzyme’s action and bioaccessibility to meat during gastric digestion by using multimodal imaging and *in situ* microspectroscopy. Supervisor of a scientist from NARO (M. Motoyama) for 2 years.

**Steering Committees and Imaging Cellular network:** Member of the French Society of Microscopy (SFμ), of the Scanning Electron Microscopy Philips Association (SEMPA), of the French association of the users of synchrotron (AFURS). Member of the steering committee of the "Centre for Cell Imaging and Health" from the Faculty of Medicine of Clermont-Ferrand.  
Co-manager of the INRA microscopists network (RμI).  
Leader of the organizing committee and member of the scientific committee of the 61<sup>st</sup> International Congress of Meat Science and Technology (ICoMST) held in Clermont-Ferrand (France, 23-28<sup>th</sup> of august 2015)

### **Supervisory of students**

From 1993, Supervisor/co-supervisor of 20 masters and 8 PhD students

**Research publications:** 50 scientific papers in peer-reviewed scientific journals, more than 100 scientific communications in congresses, 6 book chapters.

[https://www.researchgate.net/profile/Thierry\\_Astruc/contributions](https://www.researchgate.net/profile/Thierry_Astruc/contributions)