

INRA UR083

Poultry Research Unit Unité de Recherches Avicoles

Bertrand MEDA



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November 2012

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AGRICULTURE
ENVIRONNEMENT

INRA

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General objectives

- Produce basic knowledge in the field of avian genetics and physiology with a perspective of integrative biology
- For the development of sustainable breeding schemes :
 - Poultry nutrition
 - Egg and meat quality
 - Innovative breeding strategies



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Organisation



➤ Partnership between two divisions of INRA :

- « Animal Physiology and Livestock Breeding » & « Animal Genetics »

➤ 52 INRA permanent staff (Researchers 26, Technicians 26)

➤ PhD students 10

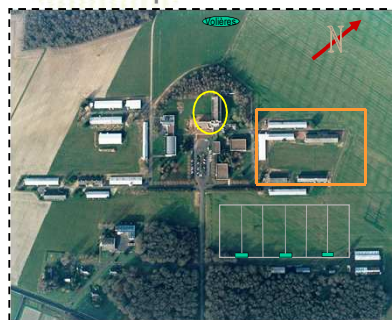
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Breeding facilities of the Experimental Unit

- Director : N. Sellier
- Staff : 35
- 18 breeding buildings
- 10 000 m²
- 130 cells
- 1 hatchery
- 50 000 eggs
- 8 species
- 1 Mill
- 350/400T feed/year
- 500 batches
- 1 Slaughter house (EC approved)



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Local Partnership for Technology Transfer with Technical Institute for Aviculture ITAVI (4 engineers),

- INRA : URA, UMRPRC, UEPEAT

➤ Field : Nutrition, Product Quality, Animal Welfare



Long standing partnership with SYSAAF on Poultry Selection

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Programs by team

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Nutritional Dynamics

11 permanent positions

Feeding behaviour
I Bouvarel, AM Chagneau,
P Lescoat,

Breeding systems
I Bouvarel, P Lescoat,
L Bignon, B. Méda



Innovative Breeding strategies


Nutritional values
M Lessire

Digestive physiology
I. Gabriel, A Nancy, M. Duclos

Sustainable Poultry Breeding Systems

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Avian Genetics

7 permanent positions

Sensory and technological quality of meat
E. Duval


Food safety
F. Calenge
C. Beaumont





Product Quality & Adaptation


Digestive efficiency for reduced environmental impact
S. Grasteau



**Sustainable breeding schemes
Quality of poultry products**

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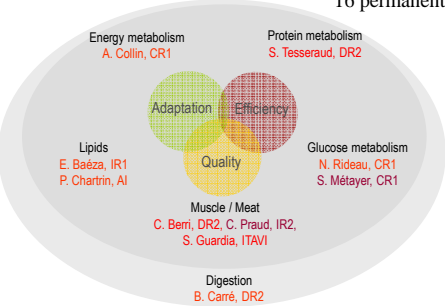
Team Growth & Metabolism

Animation : S. Tesseraud & C. Berri

16 permanent positions

Energy metabolism
A. Collin, CR1

Lipids
E. Baéza, IR1
P. Chartrin, AI



Adaptation
Efficiency
Quality

Protein metabolism
S. Tesseraud, DR2


Glucose metabolism
N. Rideau, CR1
S. Métayer, CR1

Muscle / Meat
C. Berri, DR2, C. Praud, IR2,
S. Guardia, ITAVI

Digestion
B. Carné, DR2

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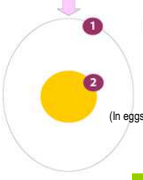


Team Egg Proteins : Natural Defense of the Egg

Objective : Identify and Characterize the Molecular Mechanisms of Egg Defense against Pathogens

9 permanent positions

Pathogens

1 Physical defense (eggshell and membranes)

2 Chemical Defense Antimicrobial proteins (In eggshell, egg white, egg yolk, membranes)

Hygienic Quality of the Eggs

VARIABILITY

Marker Assisted Selection


Breeding Schemes Egg Storage

On going PhDs

- + Functional Characterization of Proteases/Antiproteases in the Egg Yolk
- + Regulation of the Egg's Innate Immunity by Breeding Conditions



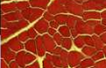
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Future Program « Sustainable Poultry Production »

- > A Multidisciplinary Program
- > Modelisation for Evaluation and Conception of New Breeding Schemes
- > In collaboration with several INRA units and ITAVI (UMT program)
- > Opened to International Collaboration

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