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## Reprogramming of rabbit somatic cells for species conservation

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# Biennial Seminar 2015

February 9<sup>th</sup> & 10<sup>th</sup> 2015 – Paris



## Day One (9 Feb 2015)

### 9h30 -10h00: Opening

Welcome Coffee in the posters room


(30')

### 10h00 – 10h40: Presentation of CRB-Anim Objectives and Governance

(30'+10')

Michèle Tixier-Boichard (INRA) - Project Coordinator

### Session 1: Challenges for the preservation of animal genetic resources

**10h40 - 11h20: Grand challenges for farm animal genetic resources and FAO expectations for an infrastructure such as CRB-Anim** Paul Boettcher (Food and Agriculture Organization)  (30'+10')

**11h20 – 12h00: Specific challenges for the preservation of genetic resources of aquaculture species** Terrence R. Tiersch (Aquaculture Research Station)  (30'+10')

**12h00 – 12h30: Presentation of WP3: current state of collections for livestock species** (20'+10')

Coralie Danchin-Burge (Idele) – WP3 Leader

12h30 - 14h: Lunch – Cocktail

### Session 2: Management of gene banks

**14h00 – 14h40: How to improve cost-effectiveness and usefulness of gene banks for research and for the society?** Harvey Blackburn (US Cryobank)  (30'+10')

**14h40 – 15h10: Nagoya protocol and ABS procedures in Europe** (20'+10')

Sarah Aubertie (FRB)

**15h10 – 15h30: Presentation of WP4: current issues and plans for the quality management** (10'+10')

Maelle d'Arbaumont (INRA) – Quality manager

15h30 – 16h00: Break in the posters room

### Session 3: Genomics for domestic animals

**16h00 – 16h40: Genomics of domestic animals: specific challenges regarding biomedical models**

Tosso Leeb (Vetsuisse)  (30'+10')

**16h40 – 17h00: Presentation of WP3: Interest of collections in CRB-Anim for biomedical models**

Catherine André (CNRS) – WP3 Leader (10'+10')

**17h00 – 17h20: Presentation of WP2.1: results and current issues**

Marco Moroldo (INRA) - WP2.1 Leader (10'+10')

### Session 4: Breeding and population genetics

**17h20 – 18h00: Grand challenges for the management of genetic variability of domestic animals**

Henner Simianer (Univ Goettingen)  (30'+10')

**18h00 – 18h20: State of molecular characterization of CRB-Anim collections (WP5)** (10'+10')

Michèle Tixier Boichard (INRA) - Project Coordinator & WP5 leader

**18h20 – 18h40: Current projects and perspectives for WP7** (10'+10')

Coralie Danchin-Burge (Idele) – WP7 Leader



19h30: Dinner



## Day Two (10 Feb 2015)

### 9h -9h30: Opening

Welcome Coffee in the posters room (30')

### Session 5: Biotechnologies for cryobanking

#### 9h30 - 10h10: The opportunities for genome editing in domestic species

Helen Sang (Roslin institute)  (30'+10')

#### 10h10 – 11h00: Presentation of WP2.2: Several results (30'+20')

Elisabeth Blesbois (INRA), Catherine Labbé (INRA), Samuel Buff (VetAgro Sup) – WP2.2 Team

#### 11h00 - 11h30: An ethical and philosophical viewpoint on CRB-Anim (20'+10')

Thomas Heams

### Session 6: Strategies for collecting samples and data for CRB-Anim

#### 11h30 – 12h00: Presentation of recommendations from CRB-Anim group species (20'+10')

Bertrand Pain (INSERM) – Scientific Committee Chairperson

#### 12h00 – 12h30: Presentation of WP4: results and current issues for the information system (15'+15')

Aurélié Delavaud (FRB), Sylvain Marthey (INRA) – WP4 Leaders

12h30 – 13h30: Lunch – Cocktail – Poster session

### Session 7: Training and education

#### 13h30 - 14h10: Training issues when a range of different species is involved in an infrastructure Experience from the Czech Republic


Otomar Linhart (Univ of South Bohemia)  (30'+10')

#### 14h10 – 14h30: Presentation of WP6: training strategy (10'+10')

Anne Duittoz (Univ Tours) – WP6 Leader

### Session 8: Perspectives

#### 14h30 - 15h10: Opportunities to extend the concept of CRB-Anim to other European genebanks

Sipke-Joost Hiemstra (Centre for Genetic Resources, the Netherland)  (30'+10')

#### 15h10 – 16h10: Round-table discussion with members of international committee (chair: Bertrand Pain) (60')

Priorities for the end of the construction phase

Priorities regarding characterization (current projects and perspectives for WP5)

Priorities regarding use of collections

#### 16h10 - 16h30 Concluding remarks: (10'+10')

Gilles Aumont and Daniel Boujard for INRA and CNRS

[www.crb-anim.fr](http://www.crb-anim.fr)

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# Reprogramming of rabbit somatic cells for species conservation

## CRB-Anim WP2.2: Developments for somatic samples to be used for reproductive biology

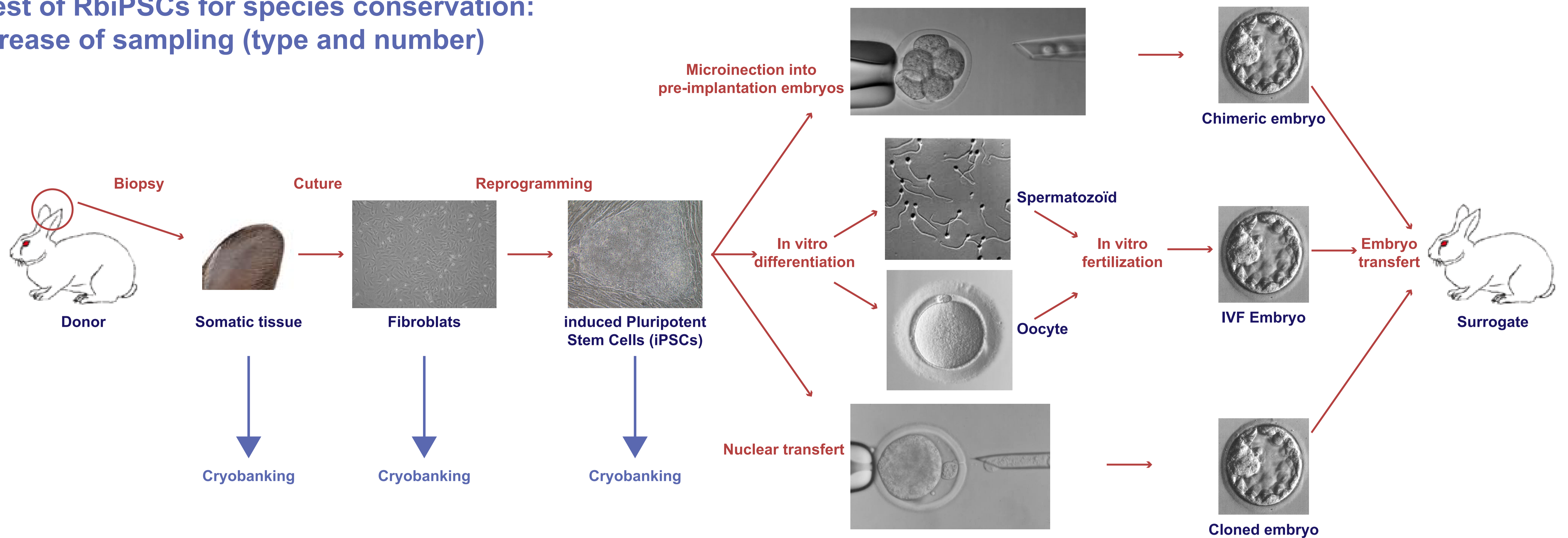
Marielle Afanassieff<sup>1</sup>, Thierry Joly<sup>2</sup>, Yann Tapponnier<sup>1</sup>, Sophie Voisin<sup>1</sup>, Anaïs Moulin<sup>1</sup>, and Pierre Savatier<sup>1</sup>

<sup>1</sup>Stem cell and Brain research Institute, INSERM U846, INRA USC1361, F-69500 Bron, France

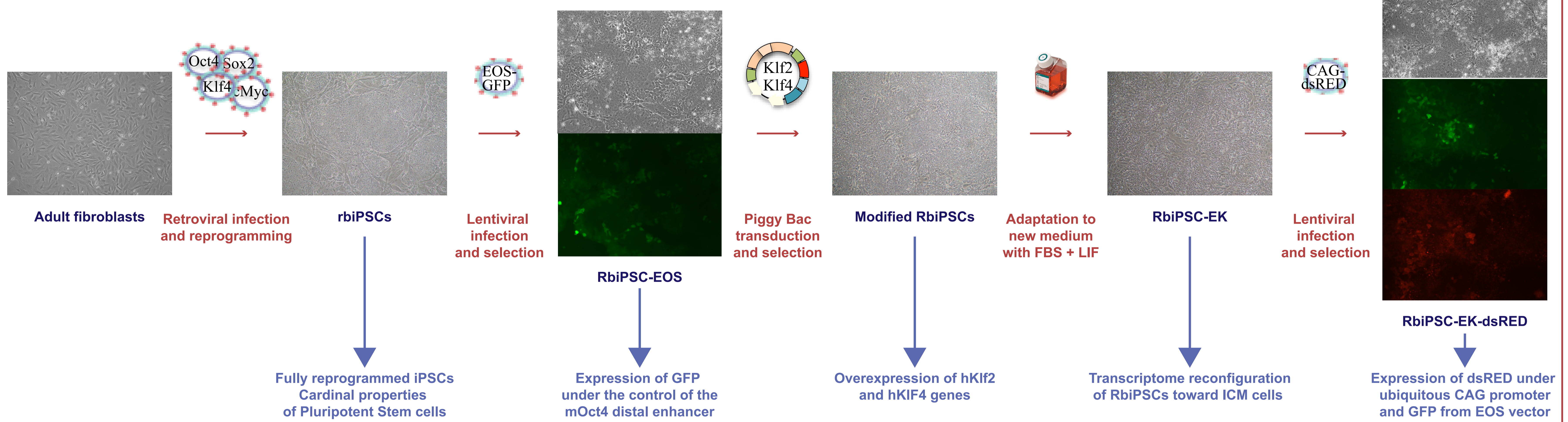
<sup>2</sup>ISARA-Lyon, F-69007 Lyon & VetAgroSup, UPSP ICE, F-69280 Marcy l'Etoile, France



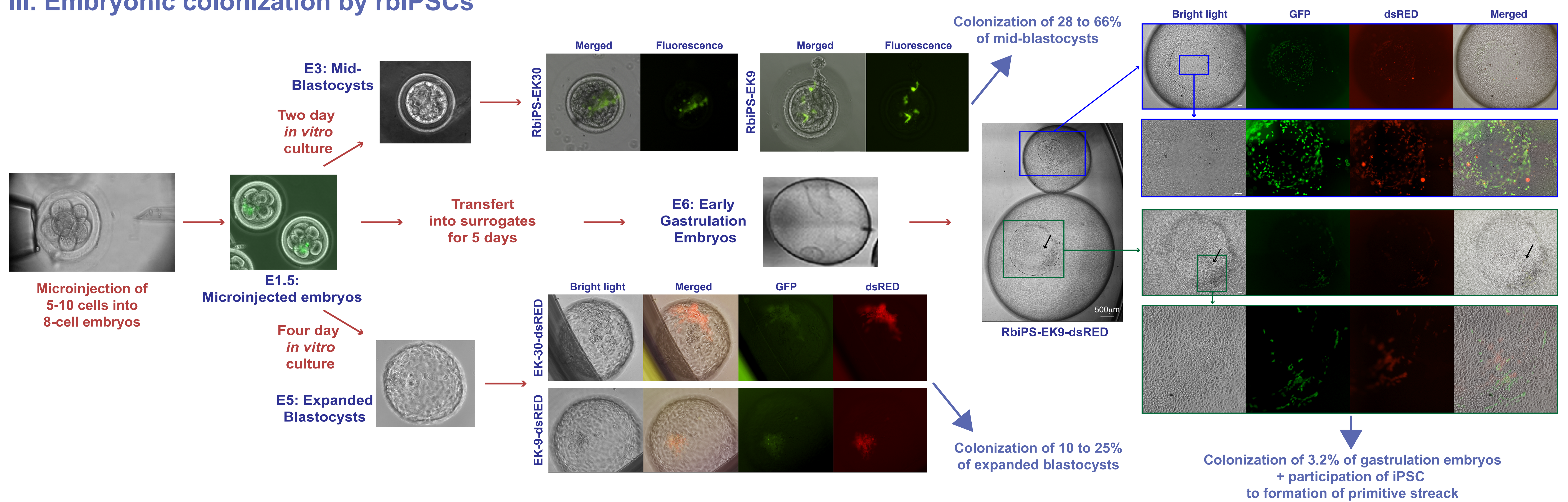
### I. Interest of RbiPSCs for species conservation: increase of sampling (type and number)



### II. Reprogramming of fibroblasts into RbiPSCs



### III. Embryonic colonization by rbiPSCs



### IV. Ongoing studies

1. Choice of donor tissues : skin fibroblasts or PBMC (Peripheral Blood Mononuclear Cells)
2. Definition of cryobanking conditions for donor tissues
3. Test of reprogramming conditions with non-integrative vectors (Sendai virus)
4. Improvement of iPSC colonization and chimaera formation