

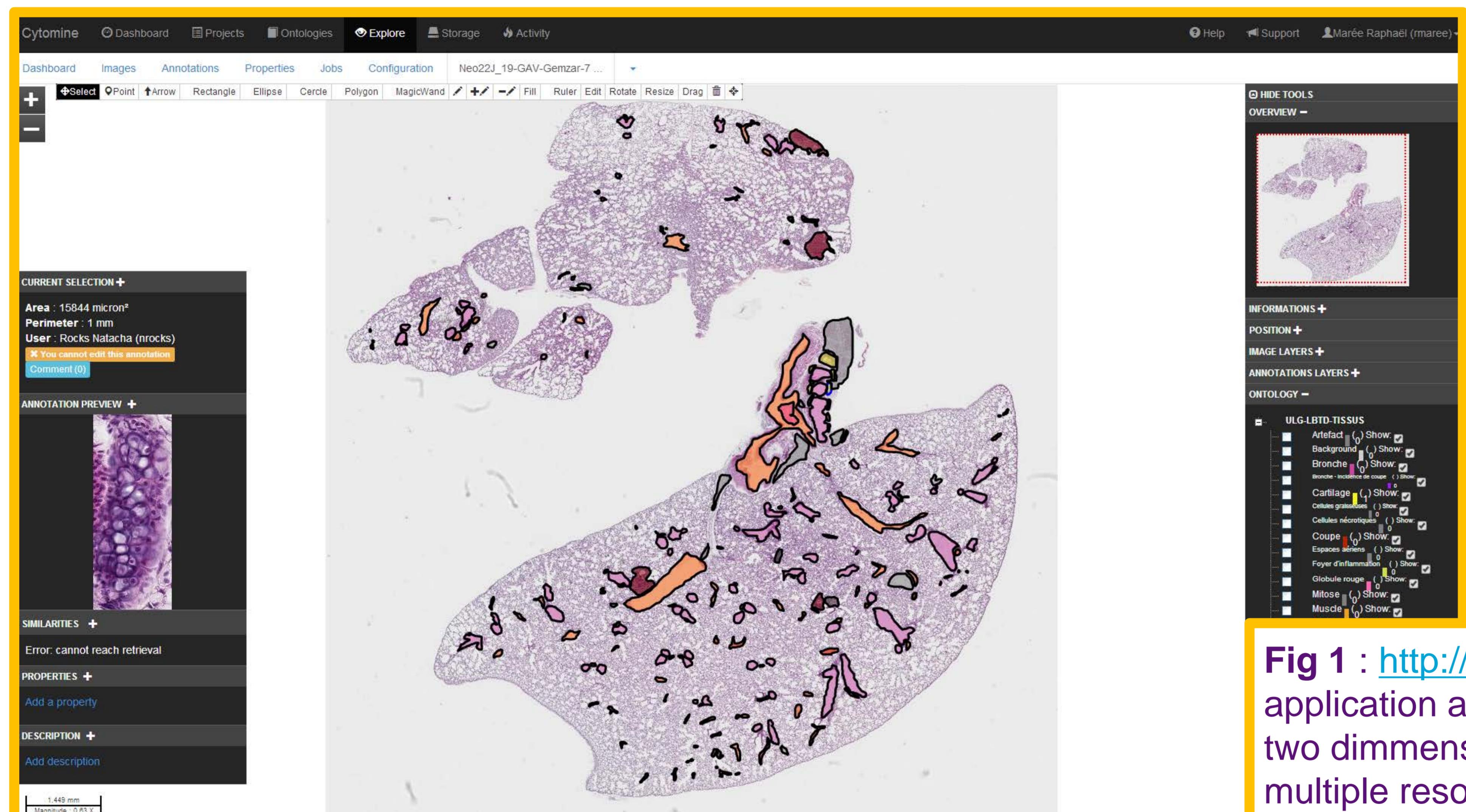


## TOWARD A NEW LEARNING ECOLOGY FOR HISTOLOGY

2012 : reform of medical studies

Skyrocketing number of students

ULg revamps teaching of histology



CYTOMINE<sup>[1]</sup> is used in new instructional designs

2014 : HISTOWEB consolidates and expands the existing

Fig 1 : <http://cytome.be> is an open-source rich internet application allowing many formats of high resolution (40x) two dimensional images to be visualized and annotated at multiple resolutions in both web and mobile clients.

HISTOWEB targets the transformation of the professional tool CYTOMINE<sup>[1]</sup> into a comprehensive and innovative teaching platform, valuing the notions of LEARNING ECOLOGY<sup>[2]</sup> and NEW LEARNING dimensions<sup>[3]</sup> seeking for lifelong competencies

### LEARNING ECOSYSTEM<sup>[2]</sup>

is a system  
complex open  
adaptive

comprising elements  
dynamic diversified  
interdependent

### NEW LEARNING dimensions<sup>[3]</sup>

Ubiquitous learning	Recursive feedback
Multimodal meaning	Active knowledge making
Collaborative intelligence	Metacognition
Differentiated learning	

### This research involves 3 areas of expertise :

**Histology** : provide content of high didactical value

**Technology** : code applets, widgets, interfaces, and learning analytics

**Pedagogy** : development of learning ecosystem, training of teachers, analyse of learning outcomes

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### References :

[1] Marée et al., A rich internet application for remote visualization and collaborative annotation of digital slides in histology and cytology, BMC Diagnostic Pathology, 8 (Suppl 1):S26, 2013.

[2] Brown, J. S. Growing up: Digital: How the web changes work, education, and the ways people learn Change: The Magazine of Higher Learning, Taylor & Francis, 2000, 32, 11-20.

[3] Kalantzis, M. and Cope, B. New learning: Elements of a science of education Cambridge University Press, 2012.

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