Jean-Philippe Collet - 20+ years of research on thrombosis

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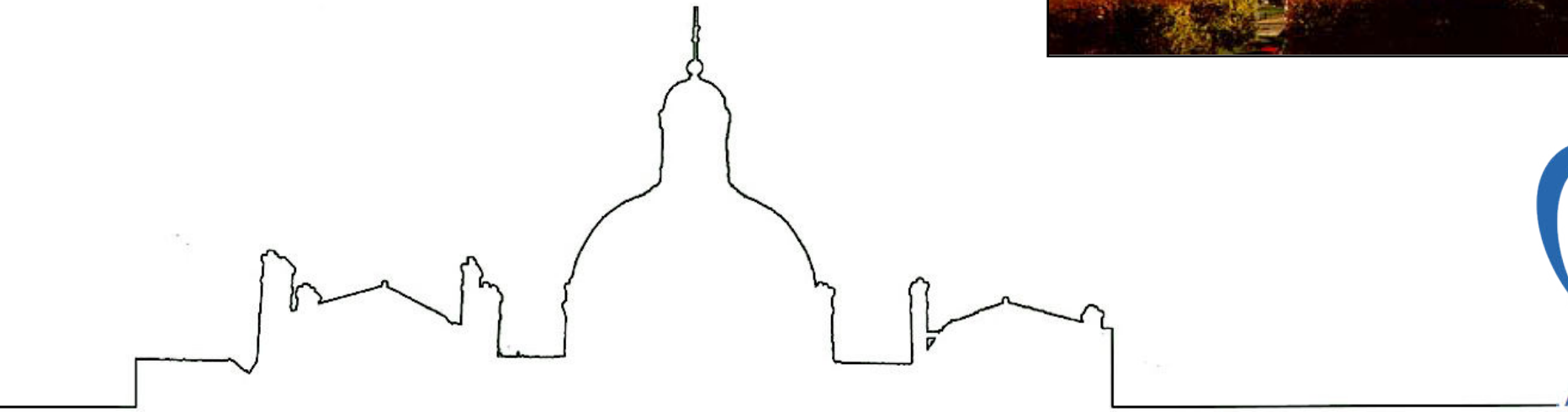


ACTION Group

Academic Research Organization

Circulation

Thrombosis

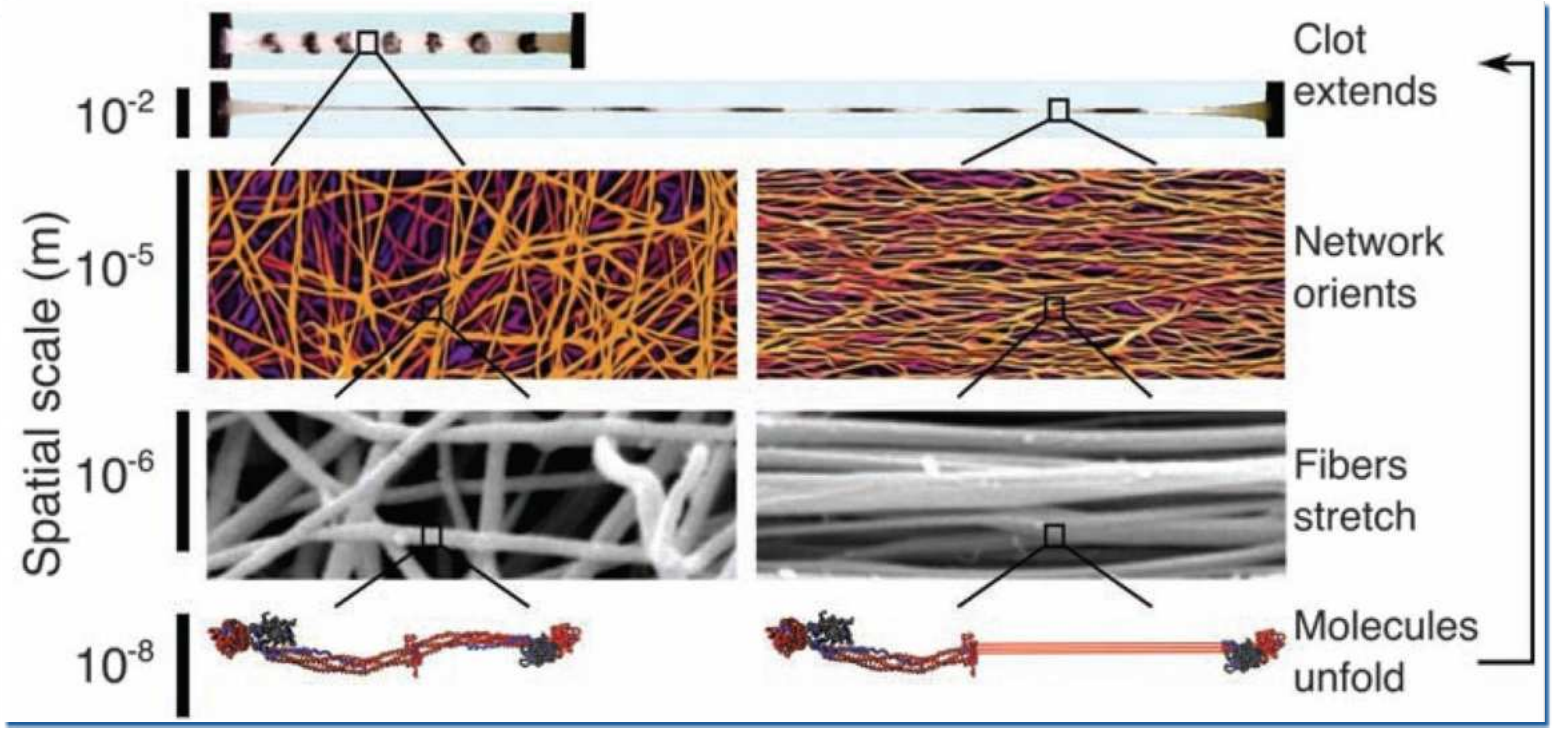
ACTION Group

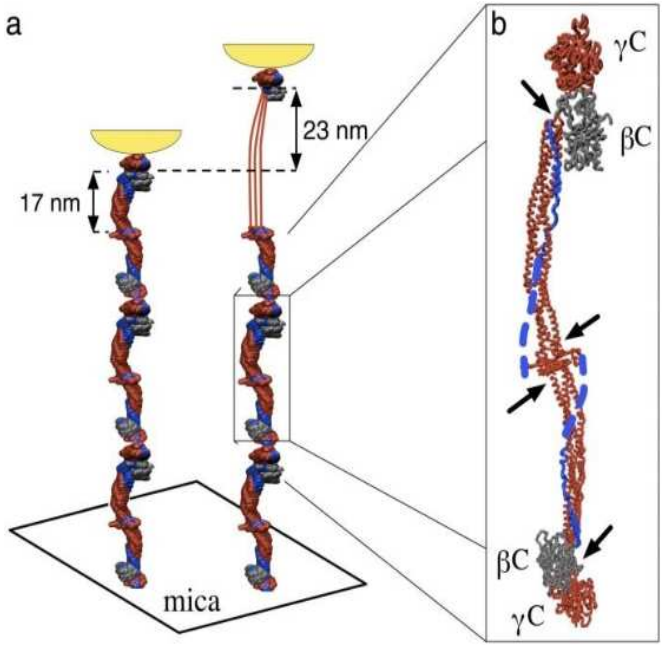
Low molecular weight heparin after mechanical heart valve replacement.	Montalescot G, **Collet JP et al. – 2000**
PCI after **subcutaneous enoxaparin** pretreatment in patients with unstable angina pectoris.	**Collet JP et al – 2001**
Effects of **Abciximab** on the architecture of platelet-rich clots in patients with acute myocardial infarction undergoing primary PCI	**Collet JP et al – 2001**
Acute release of **plasminogen activator inhibitor-1** in ST-segment elevation myocardial infarction predicts mortality.	**Collet JP et al – 2003**
Anti-Xa activity relates to survival and efficacy in unselected acute coronary syndrome patients treated with enoxaparin.	Montalescot G, **Collet JP et al. – 2004**
Impact of prior use or recent **withdrawal of oral antiplatelet agents** on acute coronary syndromes.	**Collet JP et al – 2004**
Architecture of intracoronary thrombi in ST-elevation acute myocardial infarction: time makes the difference.	Beygui F, **Collet JP et al – 2006**

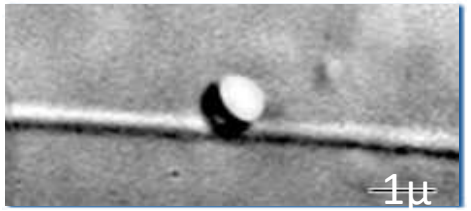
Thrombosis

Effects of various **anticoagulant treatments** on **von Willebrand factor** release in unstable angina.	Montalescot G, **Collet JP et al. – 2000**
A unique, low dose of intravenous enoxaparin in elective percutaneous coronary intervention.	Chousat R, **Collet JP et al – 2002**
Eptifibatide provides additional platelet inhibition in NSTEMI patients already treated with aspirin and clopidogrel. Results of the PEACE study.	Dalby M, **Collet JP et al – 2004**
Percutaneous coronary intervention after **fibrinolysis**: a multiple meta-analyses approach according to the type of strategy.	**Collet JP et al – 2006**
Enoxaparin anticoagulation monitoring in the catheterization laboratory using a new bedside test.	Silvain J , **Collet JP et al – 2010**
Slow response to clopidogrel predicts low response.	Bellemain-Appeix A, **Collet JP et al. – 2010**

Thrombosis
Fibrin architecture





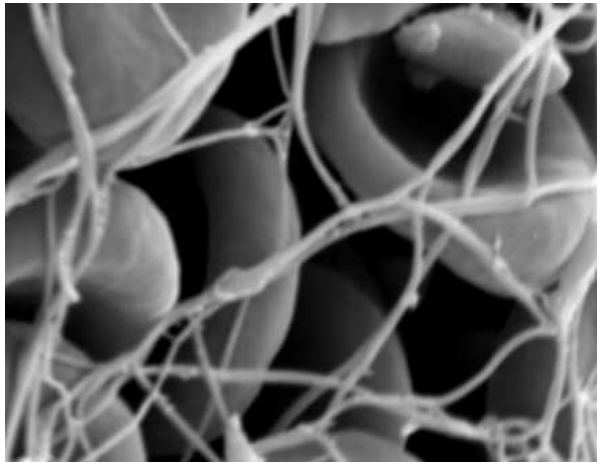


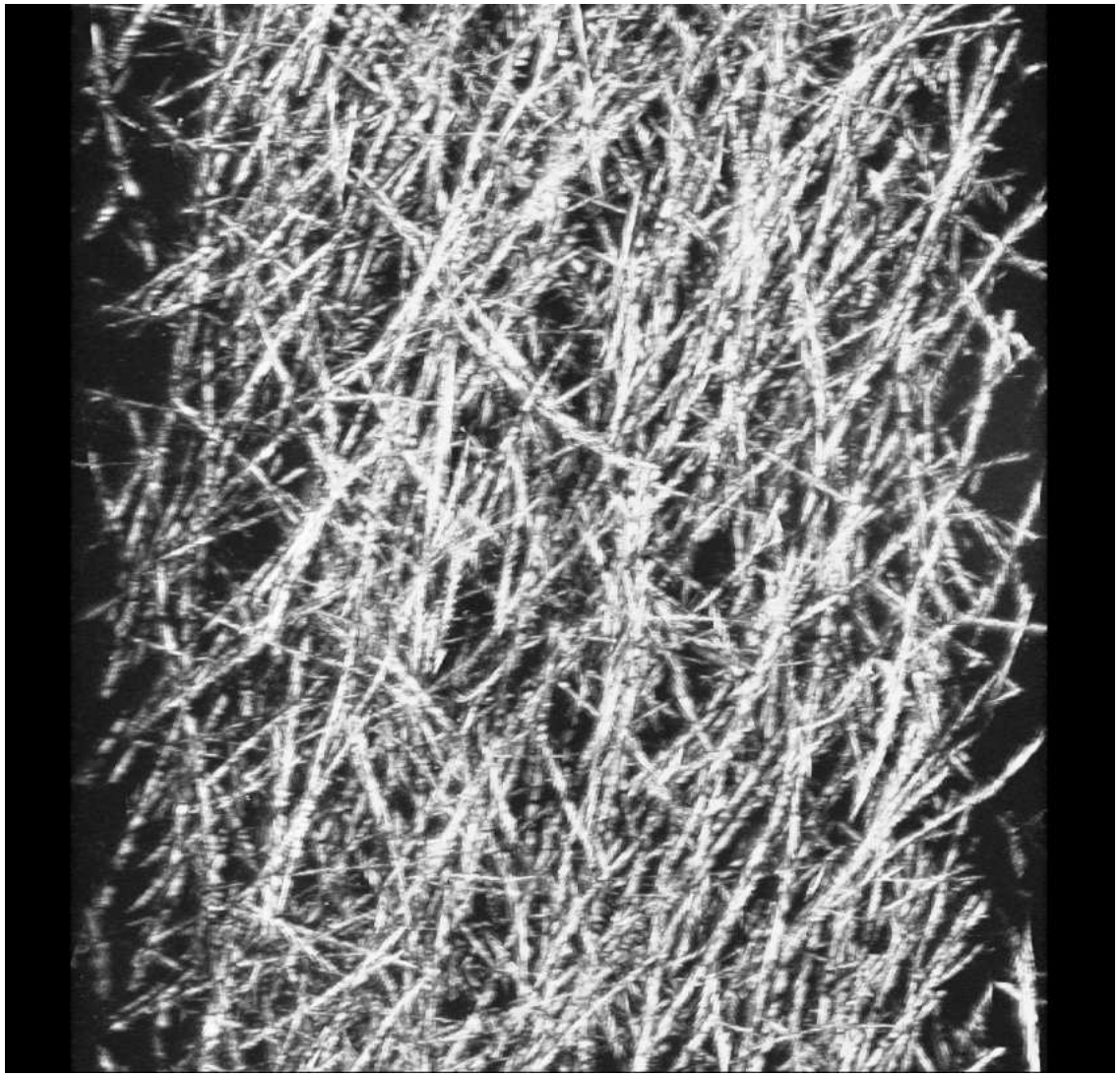
***Collet JP et al** . PNAS 2005*

***Weisel JW et al** . Science 2009*

***Brown et al** . Science 2009*

Thrombus
Fibrin architecture

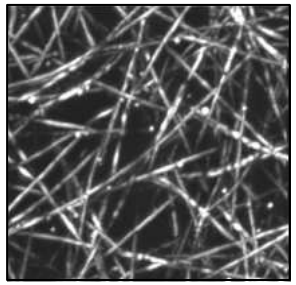


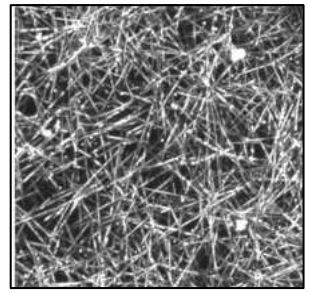


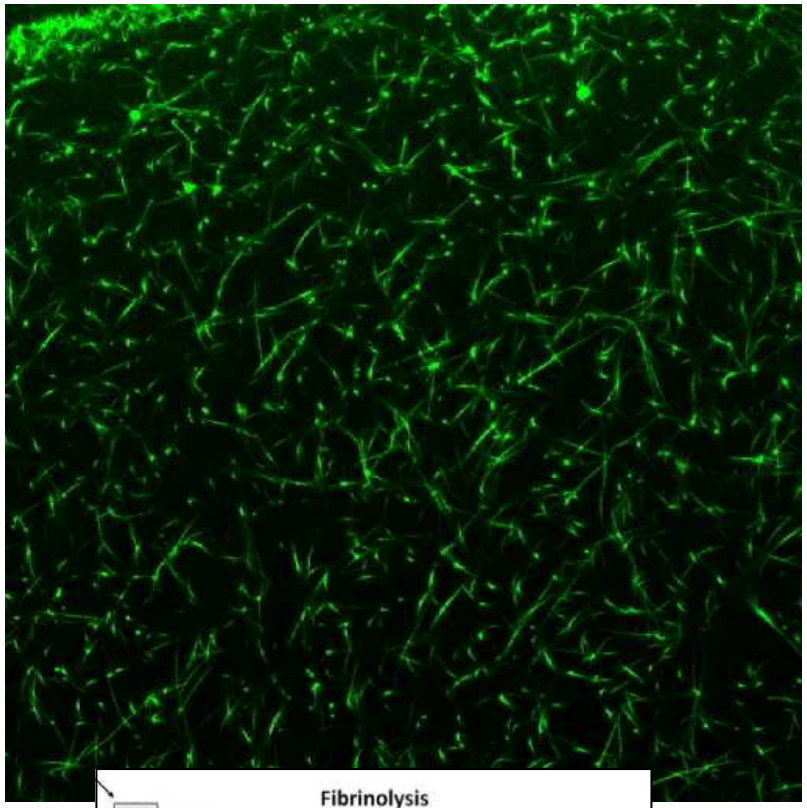
Silvain J , **Collet JP et al** . UPENN 2006

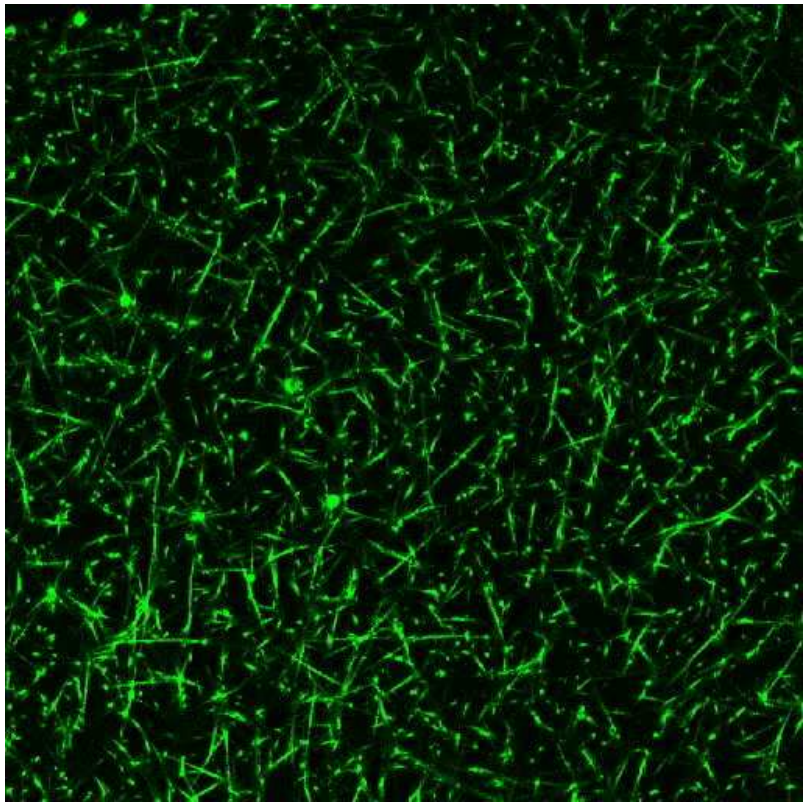
Thrombus Inhibition

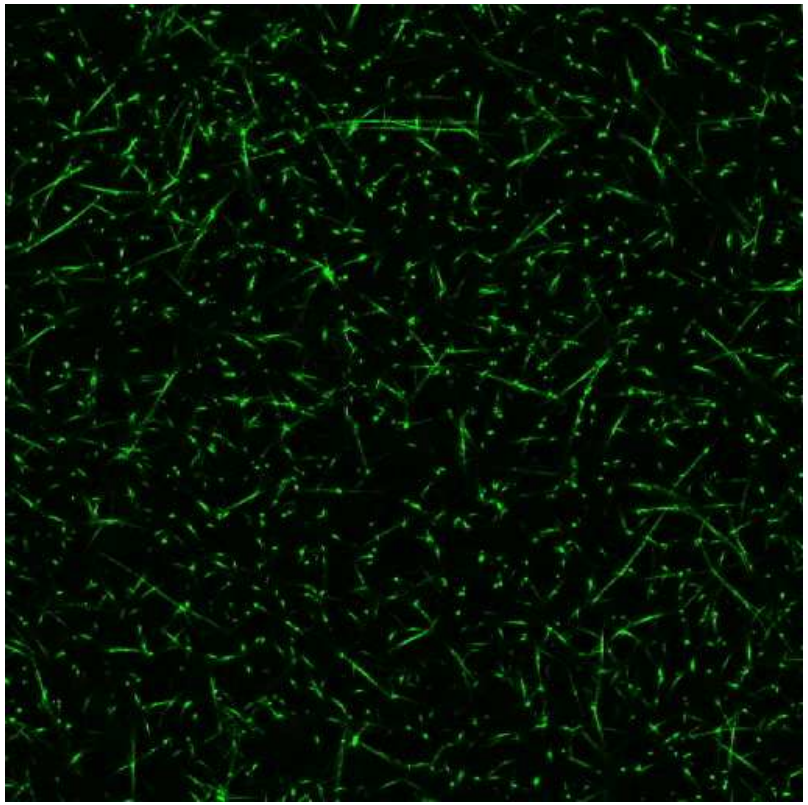
Fibrinolysis depends on fibrin phenotype

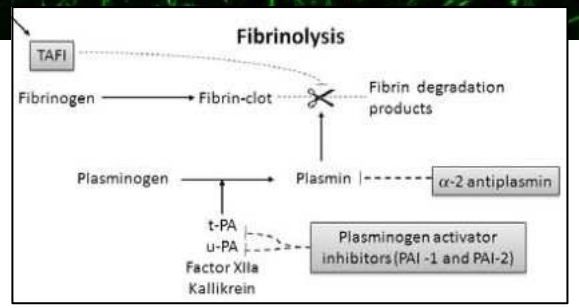












Collet JP et al. Arterioscler Thromb Vasc Biol. 2000

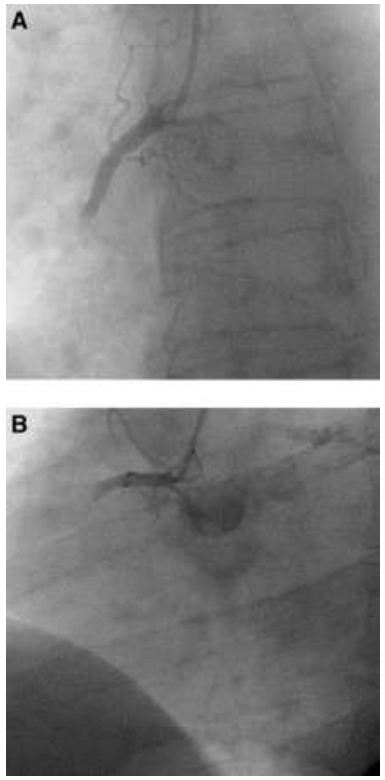
Collet JP et al. Arterioscler Thromb Vasc Biol. 2006

Silvain J, **Collet JP et al.** Thromb Haemost. 2011

Thrombus composition

Generation of the Hypothesis … "Time make the difference"

60 min



6 Hours

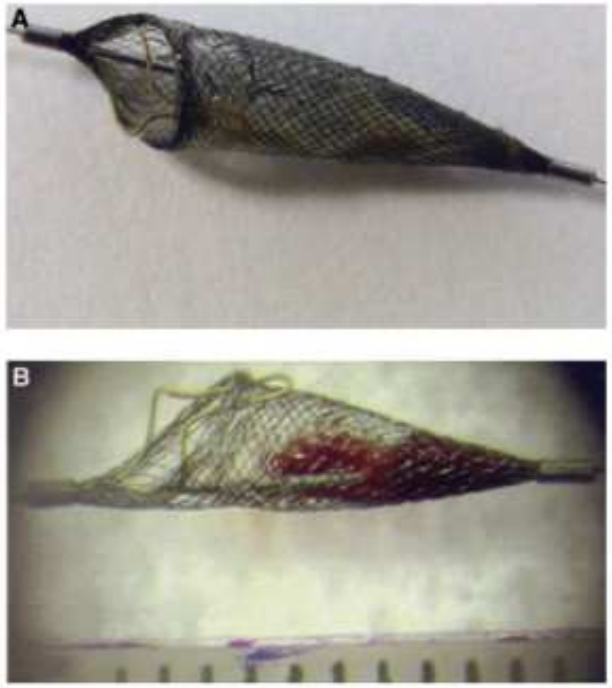
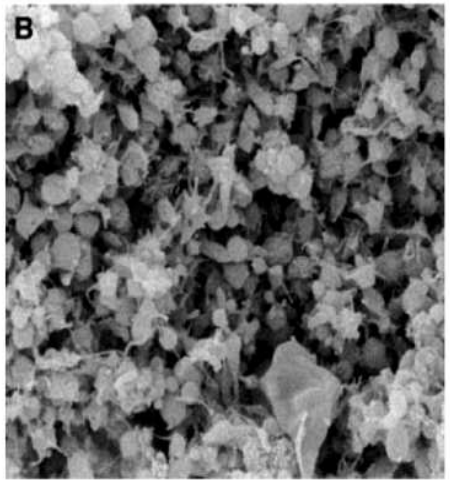
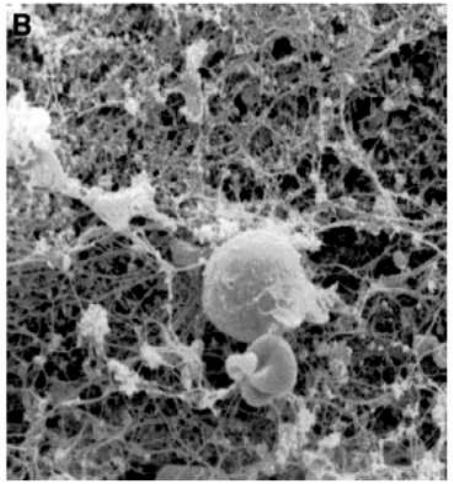


Figure 4. White (A) and red (B) thrombus trapped in the Spider filters in patients 1 and 2.

EARLY OCCLUSION

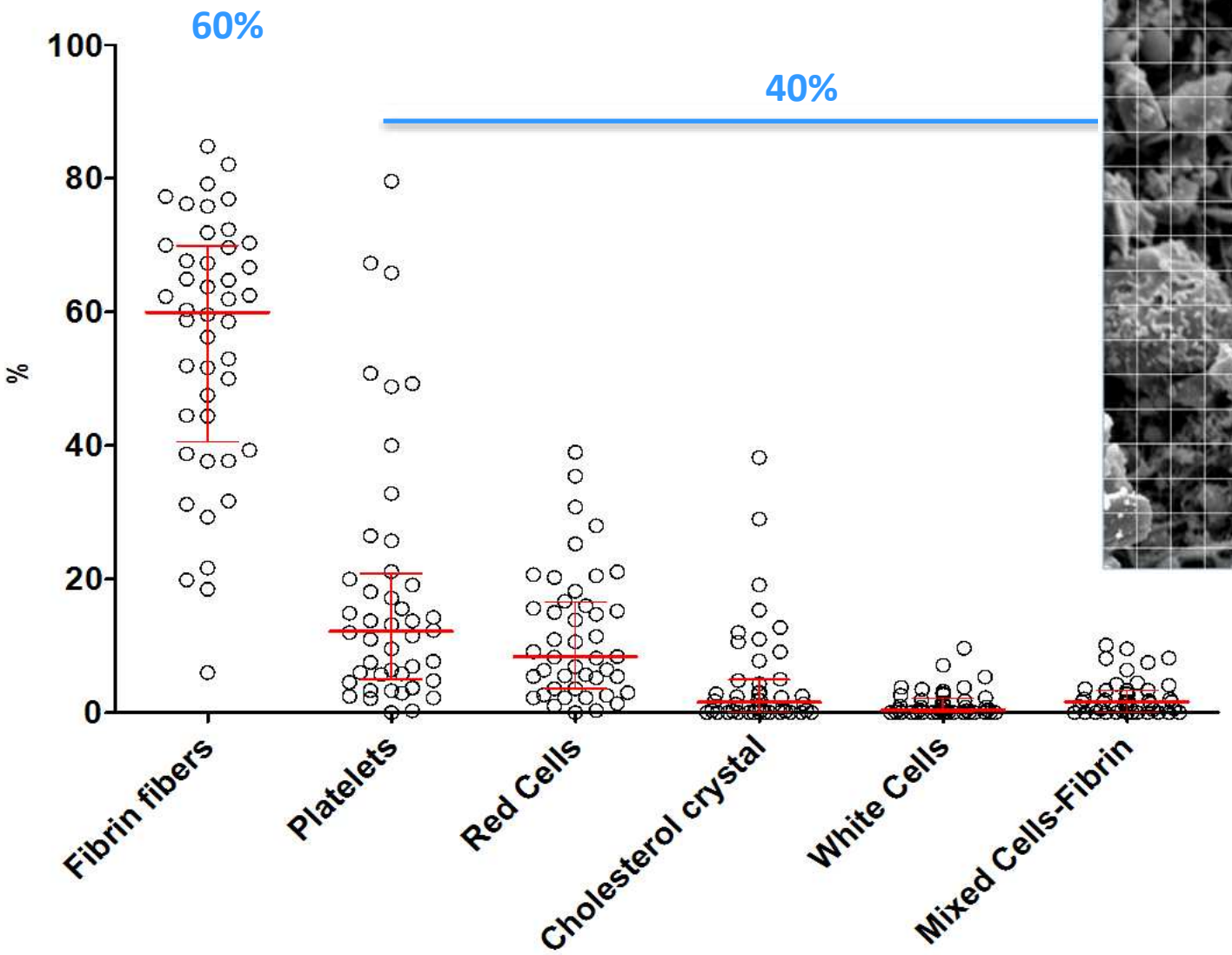


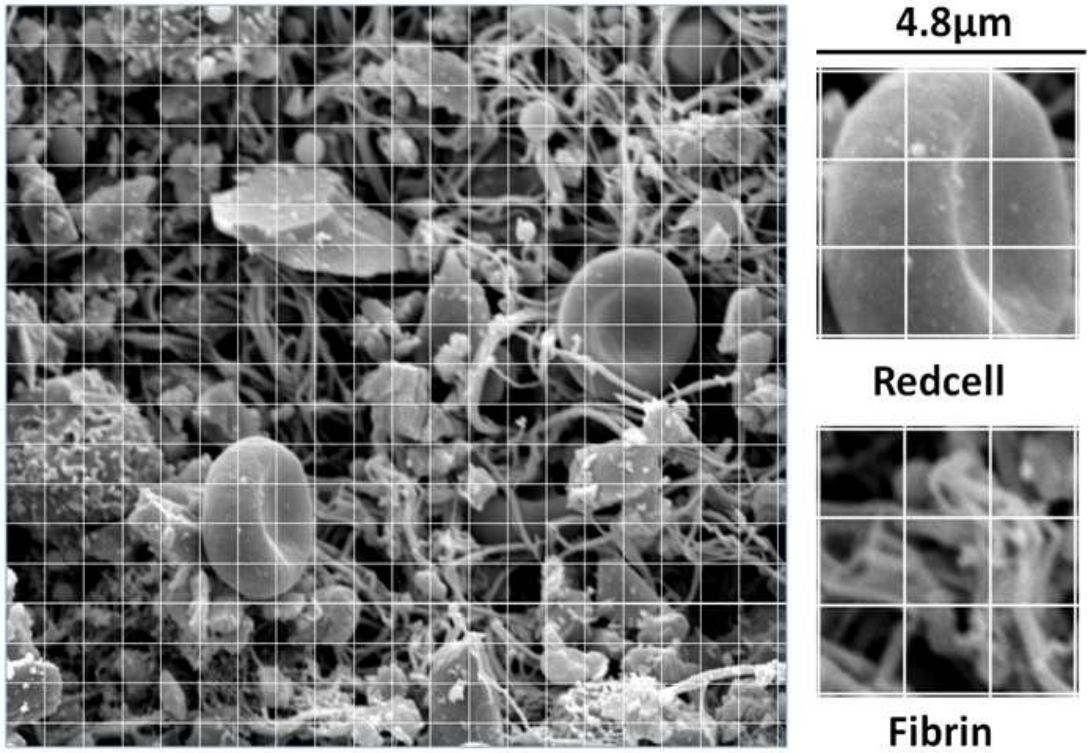
LATE OCCLUSION

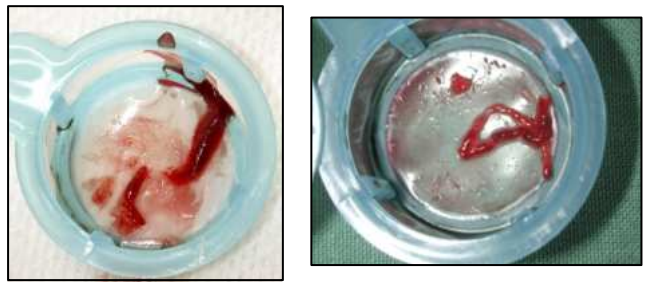


*Beygui F. , **Collet JP et al.** Circulation 2006*

Thrombus composition in MI







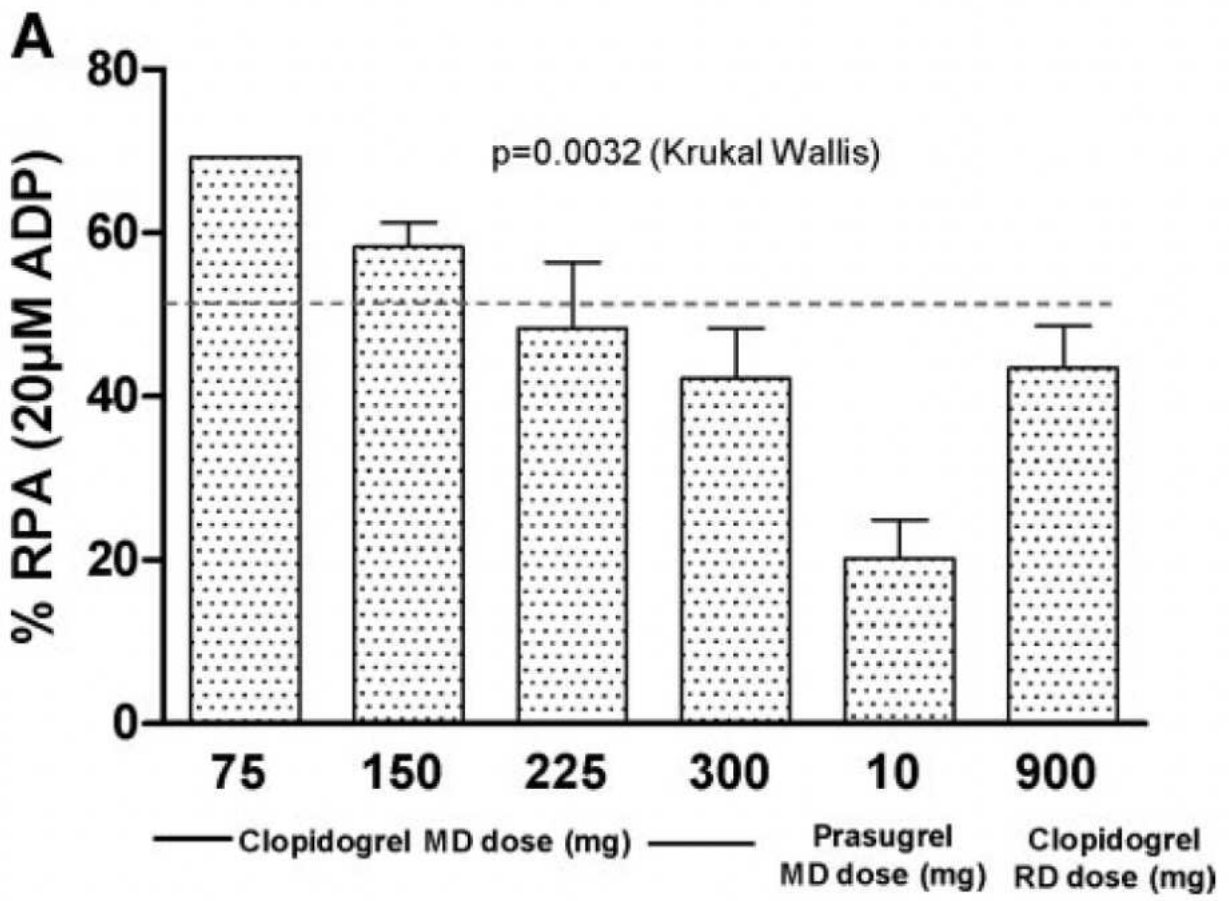
Silvain J, **Collet JP et al**. 2010

Thrombosis

Dose effect of clopidogrel reloading in patients already on 75-mg maintenance dose: the RELOAD study..	Silvain J, **Collet JP et al – 2008**
Can we override **clopidogrel resistance?**	Pena A , **Collet JP et al. – 2009**
High on-treatment platelet reactivity as a risk factor for secondary prevention after PCI : A landmark analysis of the ARCTIC study.	Montalescot G , **Collet JP et al – 2014**
Coronary revascularization in the diabetic patient.	Silvain J, **Collet JP et al – 2014**
Pretreatment with P2Y12 inhibitors in non-ST-Segment-elevation acute coronary syndrome: an outdated and harmful strategy..	**Collet JP et al – 2014**
Platelet function test-guided strategy: lost in translation?	**Collet JP et al. – 2015**
Efficacy of ex vivo autologous and **in vivo platelet transfusion** in the reversal of P2Y12 inhibition by clopidogrel, prasugrel, and ticagrelor: the APTITUDE study.	O'Connor S, **Collet JP et al – 2015**
Reasons for the Failure of Platelet Function Testing to Adjust Antiplatelet Therapy: Pharmacodynamic Insights From the ARCTIC Study.	Lattuca B , **Collet JP et al – 2019**

Stent Thrombosis

Can we override **clopidogrel resistance?**

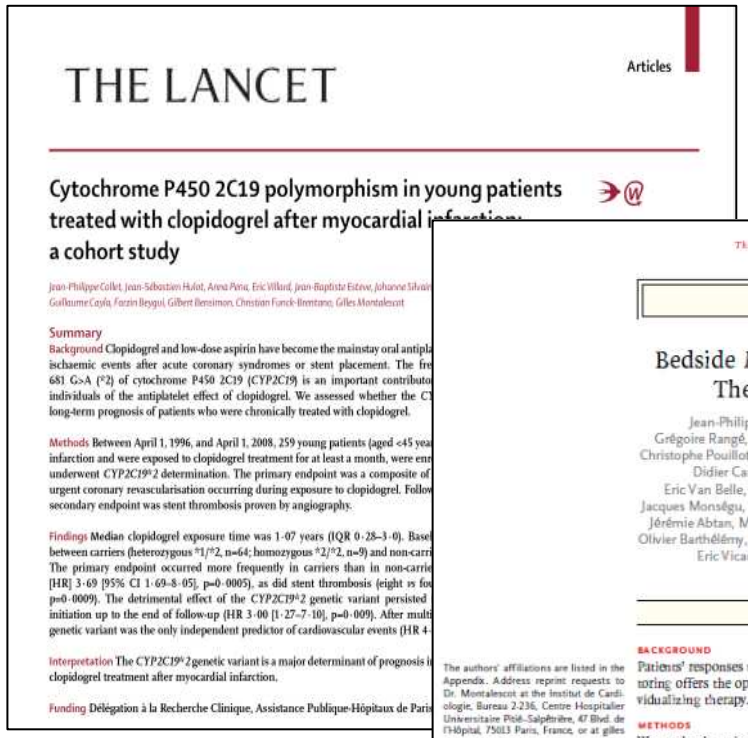


Pena A , **Collet JP et al. – 2009**

Thrombosis

Cardiovascular risk in **clopidogrel-treated patients** according to cytochrome P450 2C19*2 loss-of-function allele or PPI coadministration: a systematic meta-analysis.	Hulot JS , **Collet JP et al. – 2010**
Consensus and future directions on the definition of **high on-treatment platelet reactivity** to adenosine diphosphate.	Bonello L., **Collet JP et al – 2010**
New P2Y12 inhibitors versus clopidogrel in percutaneous coronary intervention: a meta-analysis.	Bellemain-Appaix A , **Collet JP et al – 2004**
Composition of coronary thrombus in acute myocardial infarction.	Silvain J, **Collet JP et al – 2006**
High doses of clopidogrel to overcome genetic resistance: the randomized crossover CLOVIS-2	Silvain J , **Collet JP et al – 2011**
Switching acute coronary syndrome patients from **prasugrel to clopidogrel.**	Kerneis M , **Collet JP et al. – 2013**

Platelet Function Testing

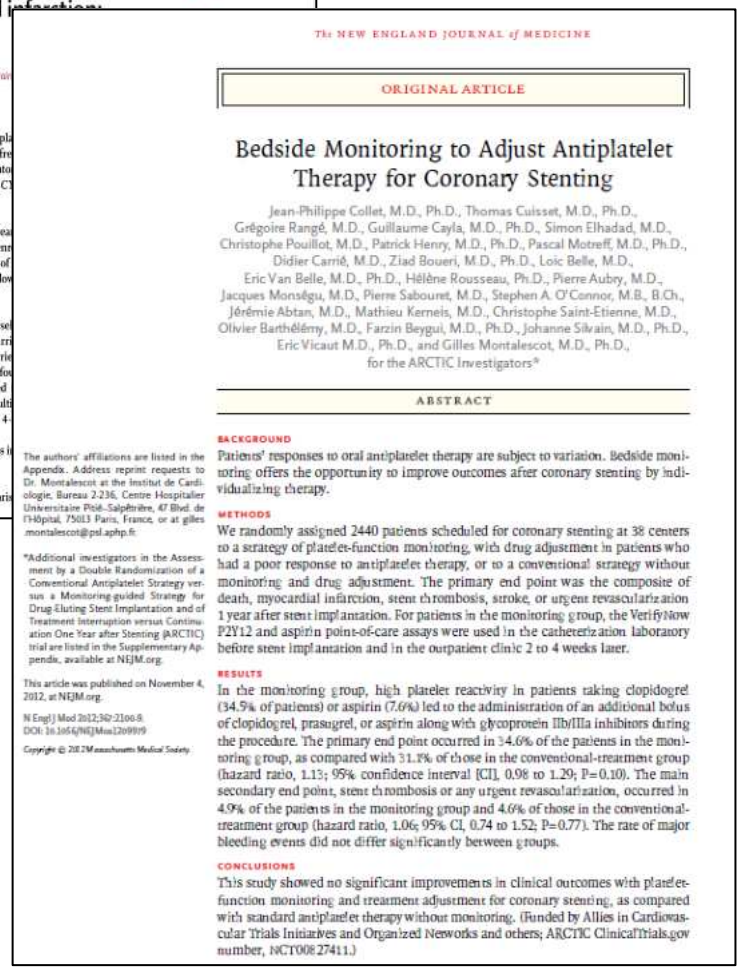


THE LANCET

Articles

Cytochrome P450 2C19 polymorphism in young patients treated with clopidogrel after myocardial infarction: a cohort study

Collet JP et al – 2009



The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Bedside Monitoring to Adjust Antiplatelet Therapy for Coronary Stenting

Collet JP et al – 2012

THE LANCET

Dual-antiplatelet treatment beyond 1 year after drug stent implantation (ARCTIC-Interruption): a random

Collet JP et al – 2014

THE LANCET

Articles

Platelet function monitoring to adjust antiplatelet therapy in elderly patients stented for an acute coronary syndrome (ANTARCTIC): an open-label, blinded-endpoint, randomised controlled superiority trial

Cayla G et al – 2016

Jean-Philippe Collet - 20+ years of research on thrombosis

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