

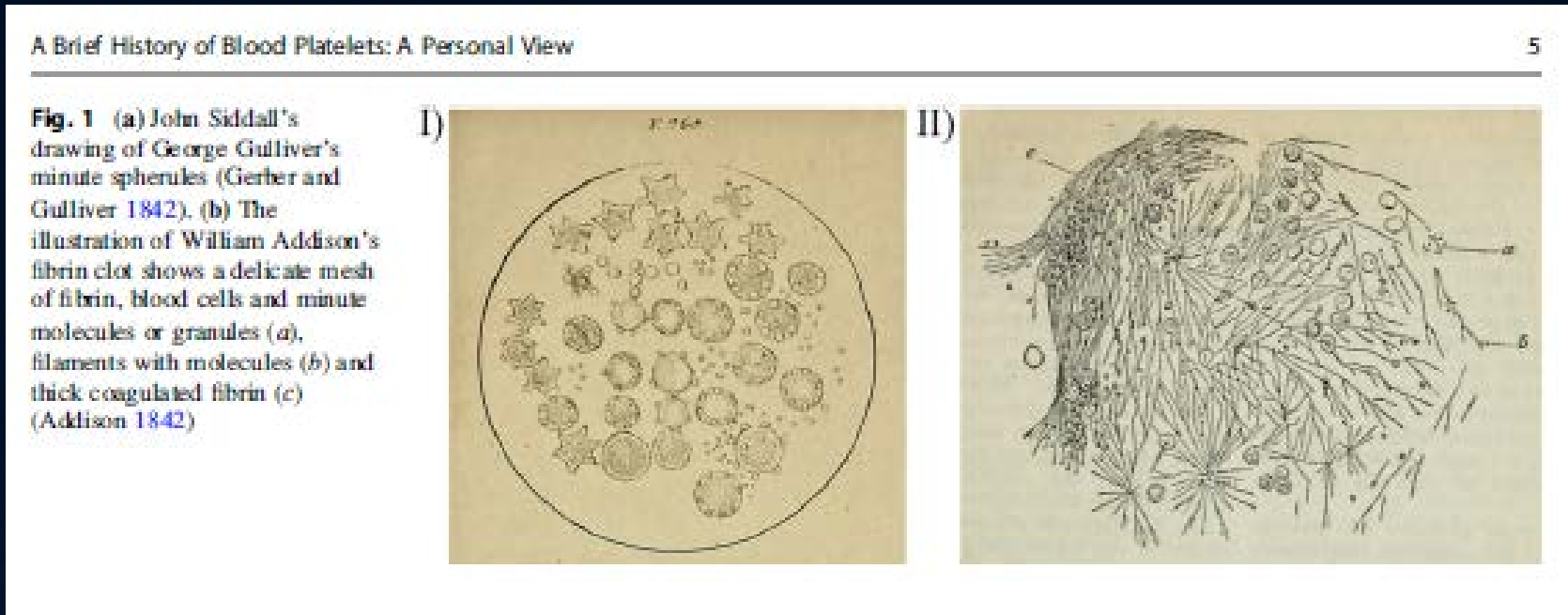


PLATELETS

BEYOND

In Athens, October 12

Evolution from “a *colorless* protoplasmic disc”



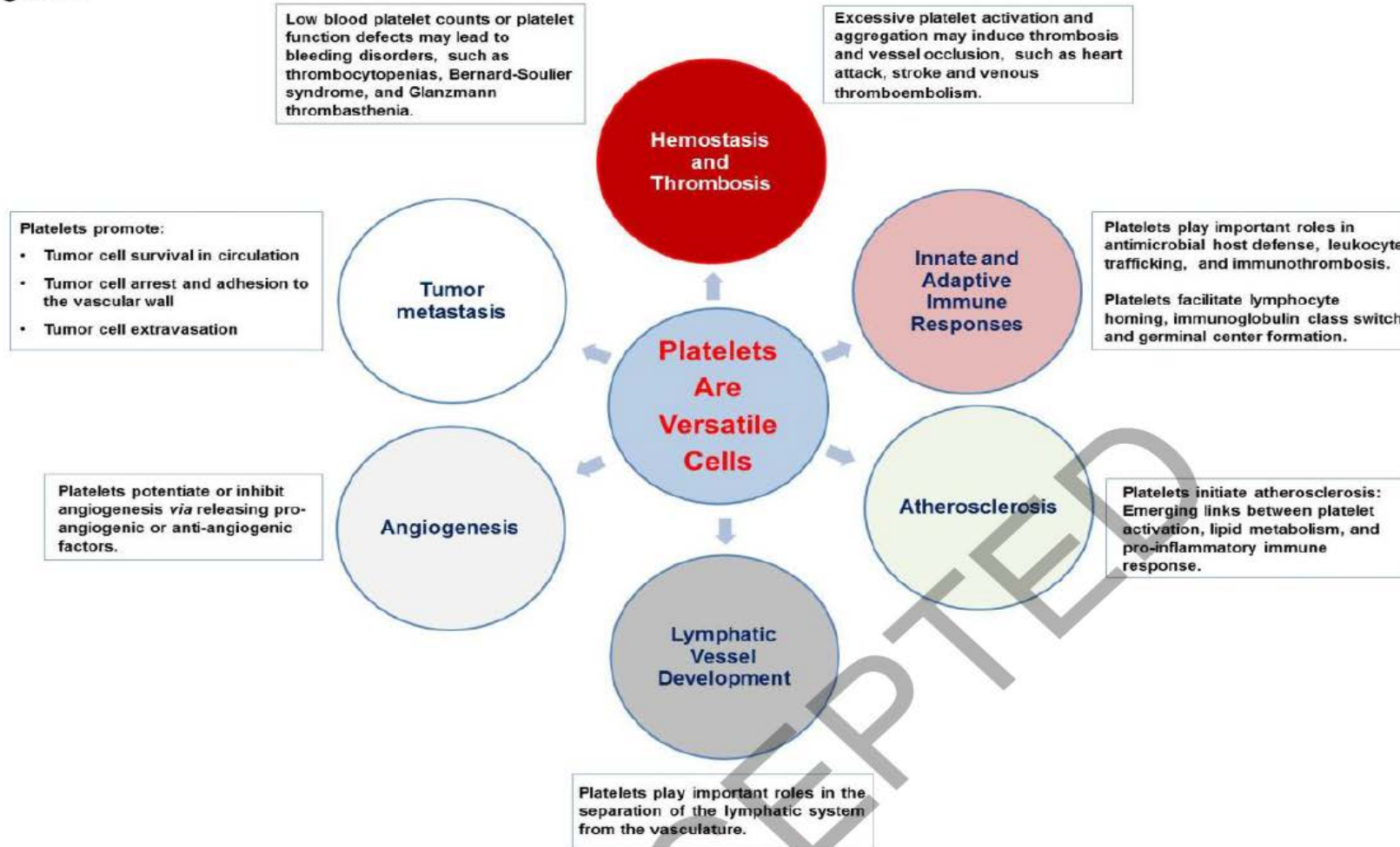
Once the Cinderella of blood cells....
Later just an acting role in Hemostasis

«The existence of a constant blood particle, differing from red and white blood cells, has been suspected by several authors for some time».

1882 Giulio Bizzozero

Evolution from “a colorless protoplasmic disc”

Figure 2



What lies beyond?????

Frontiers in Cellular Neuroscience | www.frontiersin.org

Beyond Clotting: A Role of Platelets in CNS Repair?

Francisco J. Rivera^{1,2*}, Ilias Kazanis^{3,4}, Cedric Ghevaert^{5,6} and Ludwig Aigner^{1,2}

Platelet CLEC-2: Roles Beyond Hemostasis

Katsue Suzuki-Inoue, MD, PhD¹ Nagaharu Tsukiji, PhD¹ Toshiaki Shirai, PhD^{1,2} Makoto Osada, PhD³
Osamu Inoue, MD, PhD⁴ Yukio Ozaki, MD, PhD⁵

Semin Thromb Hemost

Platelets Are at the Nexus of Vascular Diseases

Frontiers in Cardiovascular Medicine | www.frontiersin.org

Héloïse Lebas, Katia Yahiaoui, Raphaël Martos and Yacine Boulaftali*

Laboratory of Vascular Translational Science, U1148 Institut National de la Santé et de la Recherche Médicale (INSERM), Sorbonne Paris Cité, Univ Paris Diderot, Paris, France

Patrolling the vascular borders: platelets in immunity to infection and cancer

NATURE REVIEWS | IMMUNOLOGY

Florian Gaertner^{1*} and Steffen Massberg^{2*}

Unanswered questions...

Physiologic Process	Mechanism (s)	Reference
Biomarker (Particulate Matter/Air Pollution)	Activation Platelet leukocyte adhesion	6
Inflammation	Secretion, Cell signaling	7, 8
Primary Immune Response	Platelet-Leukocyte adhesion	7, 9
Infection	T Cell Recruitment	10
Angiogenesis	Source of vascular endothelial growth factor (VEGF)	7, 11
Wound Healing	Platelet Derived Growth Factor	7
Metastasis	Adhesion, Immunologic protection, activation	12

Table 3. Examples of known non-hemostatic functions of platelets

The perfect test for platelet function does not exist...

An array of genomic and functional tests are needed, as are patient response tests for safety, tolerability and efficacy.

Platelet function: beyond hemostasis—where does the lab fit in?