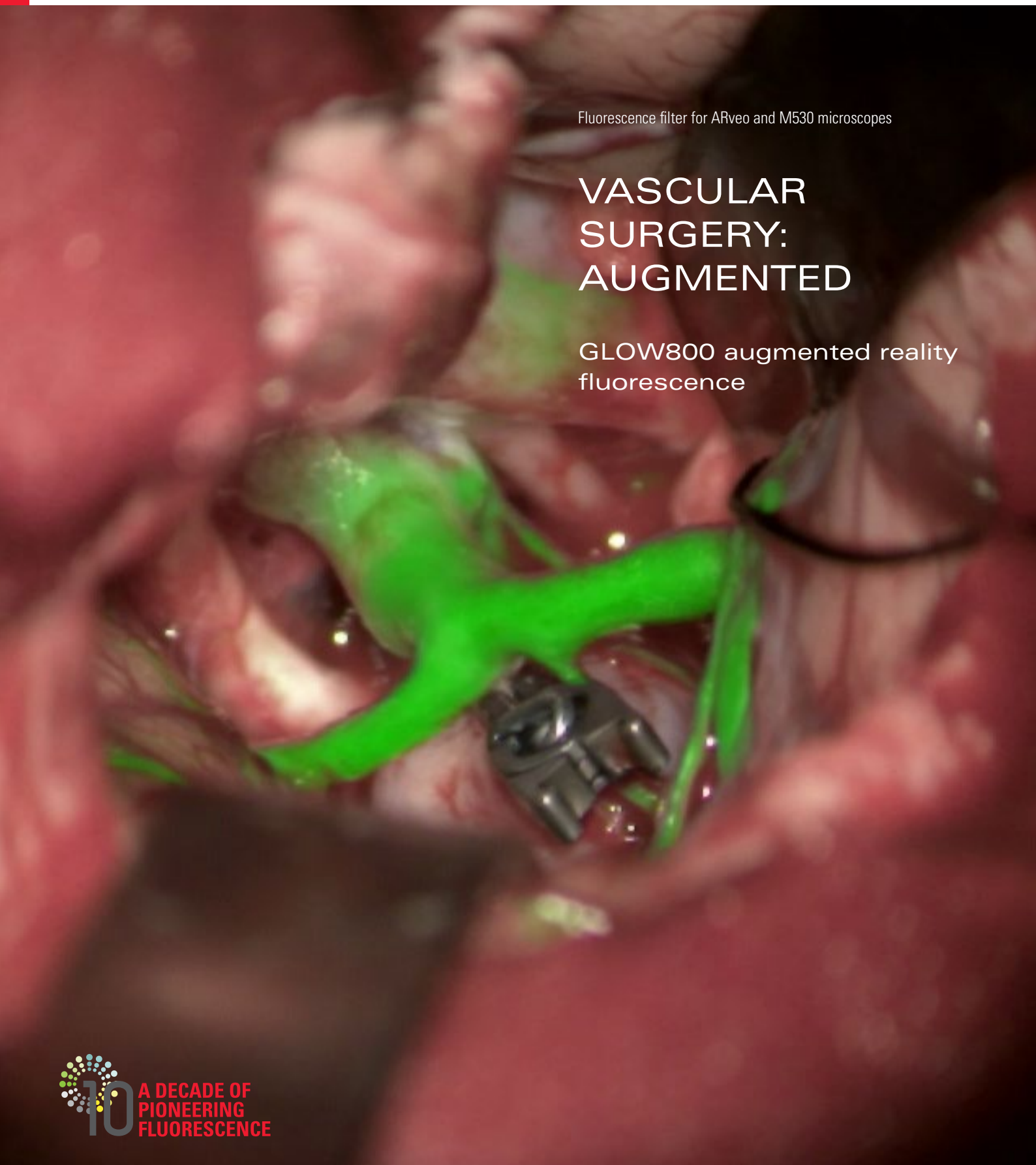
From Eye to Insight

Leica MICROSYSTEMS



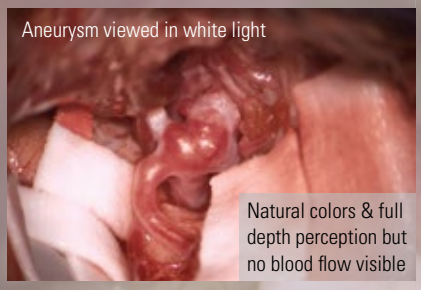
Fluorescence filter for ARveo and M530 microscopes

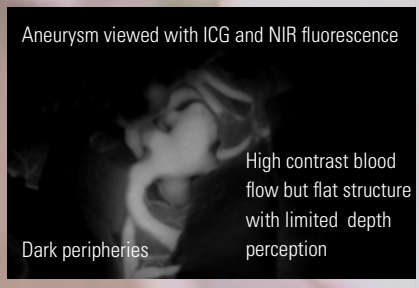
VASCULAR SURGERY: AUGMENTED

GLOW800 augmented reality fluorescence

10 A DECADE OF PIONEERING FLUORESCENCE

ONE AUGMENTED VIEW OF CEREBRAL ANATOMY & REAL-TIME BLOOD FLOW





Natural color throughout the field of view

Reflection and shadow differentiation provide depth perception for spatial orientation

Aneurysm viewed with ICG and GLOW800 AR fluorescence

Observe cerebral anatomy in natural color, augmented by real-time vascular flow, with full depth perception, for confident interventions.

Full visualization of blood flow and anatomy during cerebrovascular procedures is critical for a confident assessment and decisions. In the past you could only view flow by pausing surgery and watching the black and white near infrared (NIR) fluorescence video, which meant losing depth perception and anatomical detail. Now with GLOW800 augmented reality (AR) fluorescence you have everything in one: Naturally-colored anatomy, vascular flow and full depth perception in a single, augmented, real-time view!

One complete picture of the cerebrovascular region

> No more mental gymnastics to recall and reconcile the black and white blood flow video with the natural anatomical view

> Crisp delineation helps you limit potential compromise or obstruction of surrounding perforators and small vessels

> Depth perception without dark peripheries supports clear spatial orientation, aiding manipulation of vessels

View blood flow without interrupting workflow

> No need to pause surgery to watch a black & white NIR fluorescence video, just activate GLOW800 mode and continue working

> AVM, aneurysm, bypass, or microvascular decompression, you always have the full view you need to confidently work in GLOW800 mode, even if there is an unexpected bleed

> Full integration with your ARveo or M530 microscope means one-touch activation of GLOW800 mode via handgrip or footswitch

Images courtesy of Cleopatra Charalampaki, MD, PhD, Professor of Neurosurgery, Department of Neurosurgery, Cologne Medical Center, Germany, Kyousuke Kamada, MD, PhD, Professor and Chairman, Department of Neurosurgery, Asahikawa Medical University, Japan, and Prof. Jacques Guyotat, Hôpital Neurologique Pierre Wertheimer, Lyon, France.

GLOW800 support the steps of your vascular neurosurgery

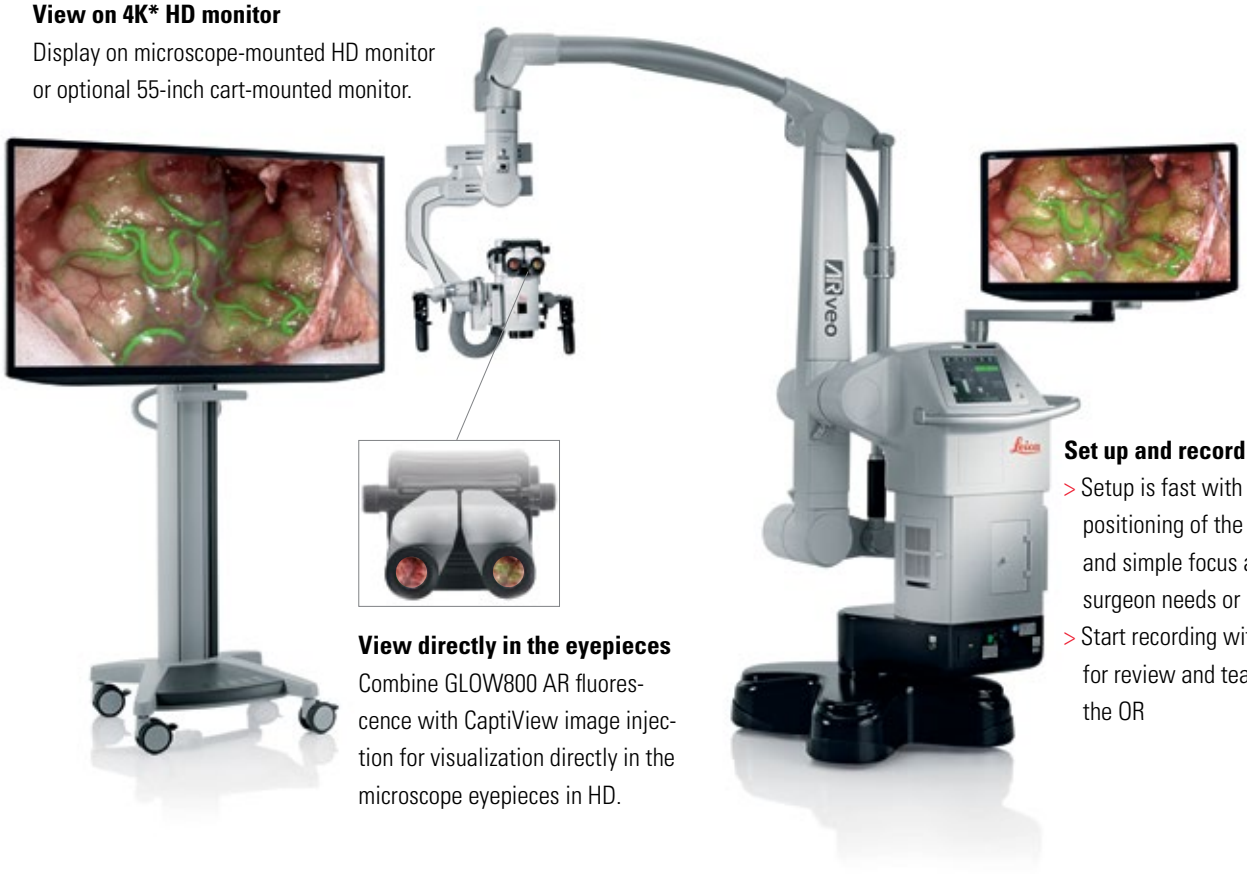
Visualization with GLOW800 AR supports each step of a surgery, for example during aneurysm clipping, it helps you:

> Assess clip placement and aneurysm occlusion
> Check if all branches proximal and distal to the clipped aneurysm are perfused and whether there is orthograde filling of the blood vessels
> Confirm the clip has not caused any compromise of surrounding blood vessels, such as kinking or partial obstruction

Select from a range of pseudo colors from magenta through cyan to green according to your preference and for optimal contrast to the tissue.

View on 4K* HD monitor

Display on microscope-mounted HD monitor or optional 55-inch cart-mounted monitor.



View directly in the eyepieces

Combine GLOW800 AR fluorescence with CaptiView image injection for visualization directly in the microscope eyepieces in HD.

Set up and record with ease

> Setup is fast with parfocal positioning of the fine focus and simple focus adaptation to surgeon needs or image quality
> Start recording with one touch for review and teaching outside the OR

AUGMENTING YOUR REALITY: GLOW AR

The technology behind GLOW800

Building on a decade of leadership in fluorescence imaging technology, GLOW800 fluorescence is the first of many modalities based on proprietary GLOW AR technology from Leica Microsystems.

> A sophisticated multispectral imaging sensor is able to simultaneously capture multiple spectral bands of visible and fluorescent light
> A real-time algorithm optimizes each spectral band for faithful natural coloring of tissue and accurate representation of fluorescence intensity
> Images are combined for a single, augmented view of the surgical field

Enhance your OR with 3D

The GLOW AR platform also offers optional 3D display and recording of the white light image to enhance your teaching program.

Own the platform of the future

The GLOW AR platform is designed to be fully upgradable when new GLOW imaging technologies are added in the near future so you can stay at the cutting edge of technology!

*4K monitor only available for ARveo.

Leica
MICROSYSTEMS

A decade of pioneering fluorescence from Leica Microsystems

> First surgical microscope filter with FDA 510(k) clearance for FL800 vascular fluorescence with ICG

> First surgical microscope with TriFluoro – three integrated modes of fluorescence in one microscope

> First surgical microscope with Augmented Reality (AR) fluorescence, GLOW800

> First surgical microscope filter with FDA 510(k) clearance for FL560 fluorescence

10 A DECADE OF PIONEERING FLUORESCENCE

TECHNICAL SPECIFICATIONS GLOW800

MICROSCOPE COMPATIBILITY

New and existing	ARveo M530 OH6 M530 OHX*

TECHNICAL DATA

Fluorescence excitation	790 nm
Fluorescence signal	835 nm

* Not all configurations of M530 OHX are available in all regions

Contact your local Leica representative for availability information.

Regulations and Standards

CE 0123

Class IIa GLOW800

> Council Directive 93/42/EEC on Medical Devices (MDD) and its amendments.

> IEC 60601-1 / EN 60601-1 Medical Electronical Equipment, Part 1: General requirements – including national differences of EU, CA, US.

> IEC 60601-1-2 / EN 60601-1-2 Electromagnetic Compatibility.

The Medical Division, within Leica Microsystems (Schweiz) AG, holds the management system certificates for the international standards ISO 13485 relating to quality management, quality assurance and environmental management.

CONNECT WITH US!

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