Spinach™: Illuminating RNA Research

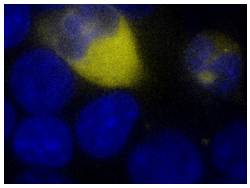
Lucerna's Spinach™ technology turns invisible biology into **real-time insight**. Our **easy-to-use tools** let you see RNA activity in living systems or fixed cells, fast.

At the core is a simple two-part system: a genetically encoded Spinach™ aptamer tag and a **non-toxic, cell-permeable dye**. The dye only fluoresces when it binds the tag—so you get bright, specific RNA signals with minimal background. Just tag **your RNA of interest** and you'll see exactly when and where it's expressed, and what it does.

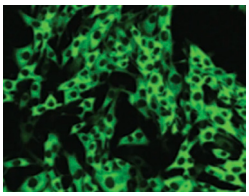
No wash steps. No complex workflows. Just **bright, beautiful data**.

Sample Capabilities

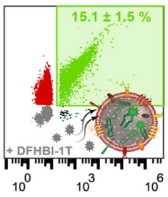
Endogenous and exogenous RNA



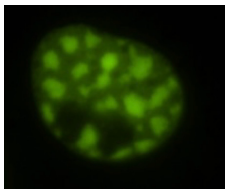
Viral delivery



Extracellular vesicles



Molecular condensates



Analytical Versatility

In vitro, in cells, in vivo

Bacteria, yeast, plant, insect, mammalian cells, small animals, EVs, IVT products, viruses, and more.

Detection methods

- Fluorescence microscopy
- High-content imaging
- Microplate reading
- Flow cytometry
- In vivo imaging

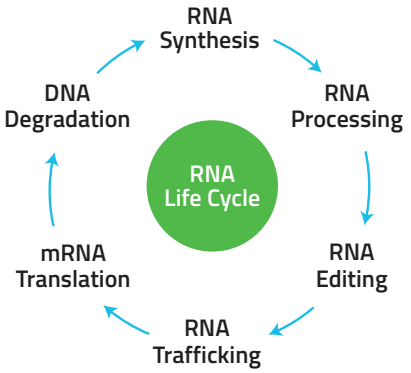
Characterization

- Kinetics
- Localization
- Binding
- Quantification
- Folding
- Modification
- Aggregation
- Delivery

Accelerating RNA Discovery with Precision, Speed, and Flexibility

Lucerna's technology delivers seamless integration into your workflow, enabling faster results and maximum versatility across diverse applications.

From RNA structure to function, from basic research to high-throughput drug screening—our tools support every phase of the RNA life cycle.



Discover our fluorescent light-up aptamer product line:

	DFHBI	BI	DFHBI-1T	DFHO	OBI
Fluorophobes					
Compatible aptamers	**Spinach2** λ_{Ex} 447nm λ_{Em} 501nm	**Broccoli** λ_{Ex} 470nm λ_{Em} 505nm **Spinach2** λ_{Ex} 460nm λ_{Em} 510nm	**Broccoli** λ_{Ex} 472nm λ_{Em} 507nm **Spinach2** λ_{Ex} 482nm λ_{Em} 505nm	**Corn** λ_{Ex} 505nm λ_{Em} 545nm **Red Brocoli** λ_{Ex} 518nm λ_{Em} 582nm **Squash** λ_{Ex} 495nm λ_{Em} 562nm	**Broccoli** λ_{Ex} 530nm λ_{Em} 580nm **Red Broccoli** λ_{Ex} 541nm λ_{Em} 590nm

Lucerna in Numbers

13	14	15	33	1,400
Patents issued	Years of operation	Plug-and-play dyes and matching aptamers	Number of countries worldwide	Citations in scientific publications

References

1. Paige *et al.* Science 2011. PMID: 21798953
2. Strack *et al.* Nat Methods, 2013. PMID: 24162923
3. Nilaratanakul *et al.* Sci Rep 2020. PMID: 32251299
4. Song *et al.* Nat Chem Biol, 2017. PMID: 28945233
5. Bader *et al.* Adv Sci, 2025. PMID: 39741121

Discover our new products:

- **HTS assays**
- **Fluorescent reporters**

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