# Article information:

Highly efficient and robust π-FISH rainbow for multiplexed in situ detection of diverse biomolecules | Nature Communications
<https://www.nature.com/articles/s41467-023-36137-4>

# Article summary:

1. FISH technologies are widely used to study gene expression and chromosome copy number variation, but lack the spatial location and tissue microenvironment information of each cell cluster.

2. Recently, several approaches have been developed to improve the intensity of FISH signals, such as hybridization chain reaction (HCR), signal amplification by exchange reaction (SABER), branched DNA (bDNA) amplification, AmpFISH, and hybridization-based rolling-circle amplification (RCA).

3. To solve the current challenges of FISH technologies, a highly efficient multiplex π-FISH rainbow method has been developed with high-intensity signals and low background noise.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy in its reporting of the development of a new FISH technology for multiplexed in situ detection of diverse biomolecules. The article provides a comprehensive overview of existing FISH technologies and their limitations, as well as an in-depth description of the newly developed π-FISH rainbow method. The authors provide evidence for their claims through references to relevant studies that support their assertions. Furthermore, they provide detailed descriptions of how the new technology works and how it can be applied in various contexts.

The article does not appear to be biased or one-sided in its reporting; rather, it presents both sides equally by providing an overview of existing FISH technologies before introducing the new π-FISH rainbow method. Additionally, there is no promotional content present in the article; instead, it focuses on providing an objective description of the new technology and its potential applications.

The only potential issue with this article is that it does not explore any counterarguments or possible risks associated with using this new technology. While this is understandable given that this is a research paper rather than a critical review paper, it would have been beneficial if these points had been addressed more thoroughly.

# Topics for further research:

* Potential risks of FISH technology
* Multiplexed in situ detection applications
* Advantages of π-FISH rainbow method
* Limitations of existing FISH technologies
* Comparison of FISH technologies
* Clinical applications of FISH technology

# Report location:

<https://www.fullpicture.app/item/2c1ab604587cf63dc09cb16a53201a9d>