

## Selection of excitation lasers and emission filters

You came for a research stay into a renowned foreign laboratory. A principal investigator showed you all instrumentation. When showing fluorescence scanner for detection of electrophoretic gels, he asked you to write down equipment that you would need for your experiments. As you will use fluorophore **A**, you need to find out whether it is possible to excite and selectively detect fluorescence of your fluorophore.

Excitation wavelengths of lasers installed are: 473 nm, 532 nm, 635 nm.  
Installed long-pass emission filters are 510 LP, 575 LP, 665 LP.

1. Which laser would you chose for excitation of your fluorophore?
2. What laser would you order to obtain maximal excitation and also maximal intensity of fluorescence of your fluorophore?  
Please, select the nearest laser which is available in [SpectraViewer](#) application.
3. Which of installed long-pass filters would be suitable for the detection of your fluorophore?
4. What band-pass filter would you order for optimal detection of your fluorophore? Please, write mean wavelength dash band width (e.g. 530/20).

To see spectral characteristics of your fluorophore and design of band-pass filter, use SpectraViewer application

<http://www.invitrogen.com/site/us/en/home/support/Research-Tools/Fluorescence-SpectraViewer.html>

Fluorophore **A** can be found in the table next to your name.

Please send me your short answers via email within 48 hours.

A correct answer = 0.5 point

		<b>A</b>
1	Akhmetgalieva, Valentina	Fluorescein (antibody conjugate)
2	Alispahic, Elma	5 ROX (carboxy X rhodamine)
3	Atatri, Sura S. M.	Ethidium Homodimer
4	Janovič, Tomáš	GFP (emerald GFP)
5	Lobello, Cosimo	SYBR Green