

Brightfield Normalization:

@echo OFF

echo "Normalize pictures which have ch1 included in their name."

echo "Please note, that if you choose overwrite, the changes applied cannot be undone!"

:start

set /p FIRST= Automatically normalize (please type AUTO) or manually put in parameters (MANU)?

IF %FIRST%==AUTO (

 goto automatically

) ELSE (

 IF %FIRST%==MANU (

 goto manually1

) ELSE (

 goto error

)

)

pause

:automatically

set /p SUP2= Overwrite the original files (please type OVER) or create duplicates with the prefix 'dup_'(please type DUPL)?

```
IF %SUP2%==OVER (  
    goto autooverwrite  
) ELSE (  
    IF %SUP2%==DUPL (  
        goto autduplicate  
    ) ELSE (  
        goto error  
    )  
)
```

pause

:manually1

set /p BRIGHT= Please set the brightness of the image (A brightness value of zero means no change. The range of values is -100 to +100)

```
IF %BRIGHT% LSS -100 (  
    goto error  
) ELSE (  
    IF %BRIGHT% GTR 100 (  
        goto error
```

```
        ) ELSE (
            goto manually2
        )
    )
```

pause

:manually2

set /p CONT= Please set the contrast of the image (A contrast value of zero means no change. The range of values is -100 to +100)

```
IF %CONT% LSS -100 (
    goto error
) ELSE (
    IF %CONT% GTR 100 (
        goto error
    ) ELSE (
        goto manually3
    )
)
```

pause

:manually3

set /p SUP1= Overwrite the original files (please type OVER) or create duplicates with the prefix 'dup_'(please type DUPL)?

```
IF %SUP1%==OVER (  
    goto manoverwrite  
) ELSE (  
    IF %SUP1%==DUPL (  
        goto manduplicate  
    ) ELSE (  
        goto error  
    )  
)
```

pause

:manoverwrite

```
for %%1 in (*ch1*.tiff) do "C:\PROGRA~1\IM\convert.exe"> -convert %%1 -brightness-contrast  
%BRIGHT% %CONT% %%~n1.tiff
```

goto end

:manduplicate

```
for %%1 in (*ch1*.tiff) do "C:\PROGRA~1\IM\convert.exe"> -convert %%1 -brightness-contrast  
%BRIGHT% %CONT% dup_%%~n1.tiff
```

goto end

:autooverwrite

for %%1 in (*ch1*.tiff) do "C:\PROGRA~1\IM\convert.exe"> -convert %%1 -normalize %%~n1.tiff

goto end

:autduplicate

for %%1 in (*ch1*.tiff) do "C:\PROGRA~1\IM\convert.exe"> -convert %%1 -normalize dup_%%~n1.tiff

goto end

:error

echo Incorrect, please check your spelling (spelling is case sensitive)

goto start

:end

set /p YO=Processing is done, do you want to repeat the procedure (PROC) or exit (EXIT)?

IF %YO%==PROC (

 goto start

) ELSE (

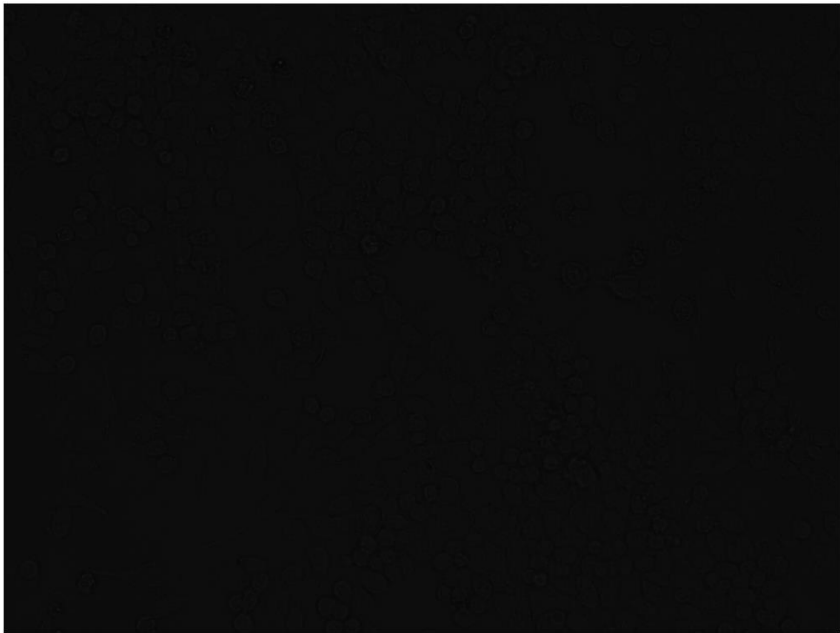
 goto kek

)

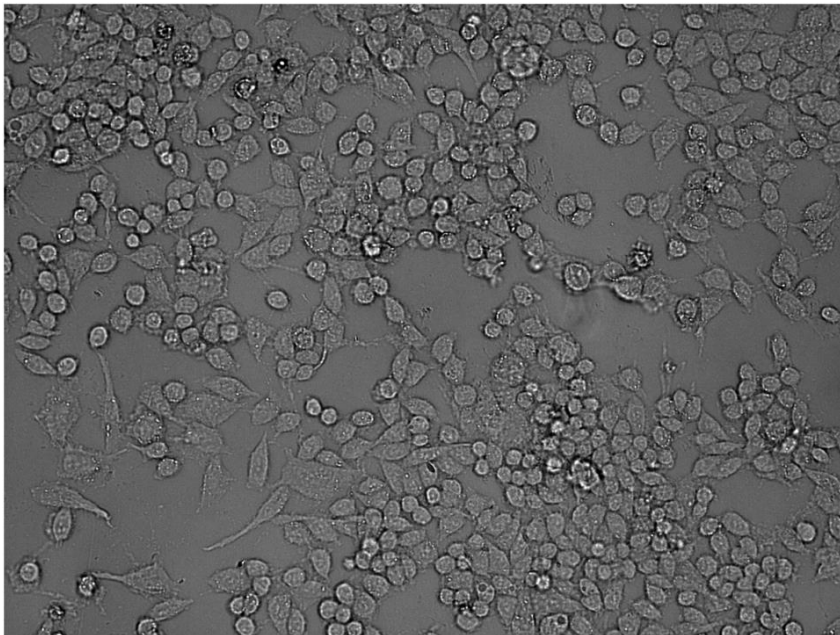
:kek

exit

Before Normalization:



After Normalization:



Coloring and Processing Images From Different Channels

```
for %%1 in (*ch2*.tiff) do "C:\PROGRA~1\IM\mogrify.exe"> -mogrify -normalize %%1 %%~n1.tiff
```

```
for %%1 in (*ch2*.tiff) do "C:\PROGRA~1\IM\mogrify.exe"> -mogrify -colorspace sRGB -type truecolor  
%%1 %%~n1.tiff
```

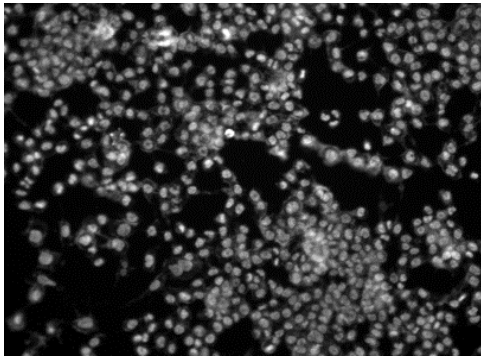
```
for %%1 in (*ch2*.tiff) do "C:\PROGRA~1\IM\mogrify.exe"> -mogrify -fuzz 40000 -fill rgba(0,0,242,0.3) -  
opaque rgb(255,255,255) %%1 %%~n1.tiff
```

```
for %%1 in (*ch2*.tiff) do "C:\PROGRA~1\IM\mogrify.exe"> -mogrify -fuzz 15000 -transparent  
rgb(25,25,25) %%1 %%~n1.tiff
```

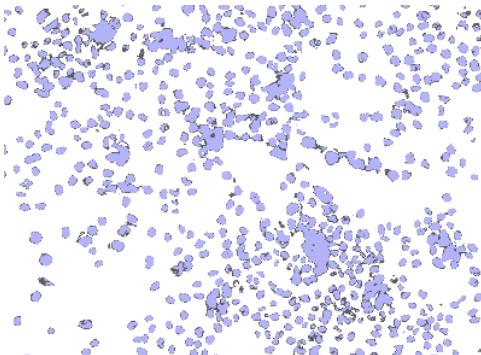
```
for %%1 in (*ch2*.tiff) do "C:\PROGRA~1\IM\mogrify.exe"> -mogrify -channel RGBA -blur 0x2 %%1  
%%~n1.tiff
```

pause

Before



After



Overlaying

```
@echo OFF

set A=1

set B=1

set C=1

set D=1

set E=1

set /p ROW=Number of rows:

set /p COLUMN=Number of columns:

set /p WELLP=Number of positions in a single well:

set /p ZSTACK=Number of Z stacks:

set /p TIME=Number of time points:

set /a TIME=TIME+1

:start

IF %E% LSS %TIME% (

    C:\PROGRA~1\IM\composite.exe> -composite r0%A%c0%B%f0%C%p0%D%-ch2sk%E%fk1fl1.tiff
r0%A%c0%B%f0%C%p0%D%-ch1sk%E%fk1fl1.tiff r0%A%c0%B%f0%C%p0%D%-
maskedch2ontoch1_sk%E%fk1fl1.tiff

    C:\PROGRA~1\IM\composite.exe> -composite r%A%c%B%f%C%p%D%-ch2sk%E%fk1fl1.tiff
r%A%c%B%f%C%p%D%-ch1sk%E%fk1fl1.tiff r%A%c%B%f%C%p%D%-
maskedch2ontoch1_sk%E%fk1fl1.tiff

    set /a E=E+1

    goto start

) ELSE (

    IF %D% LSS %ZSTACK% (

        set /a D=D+1

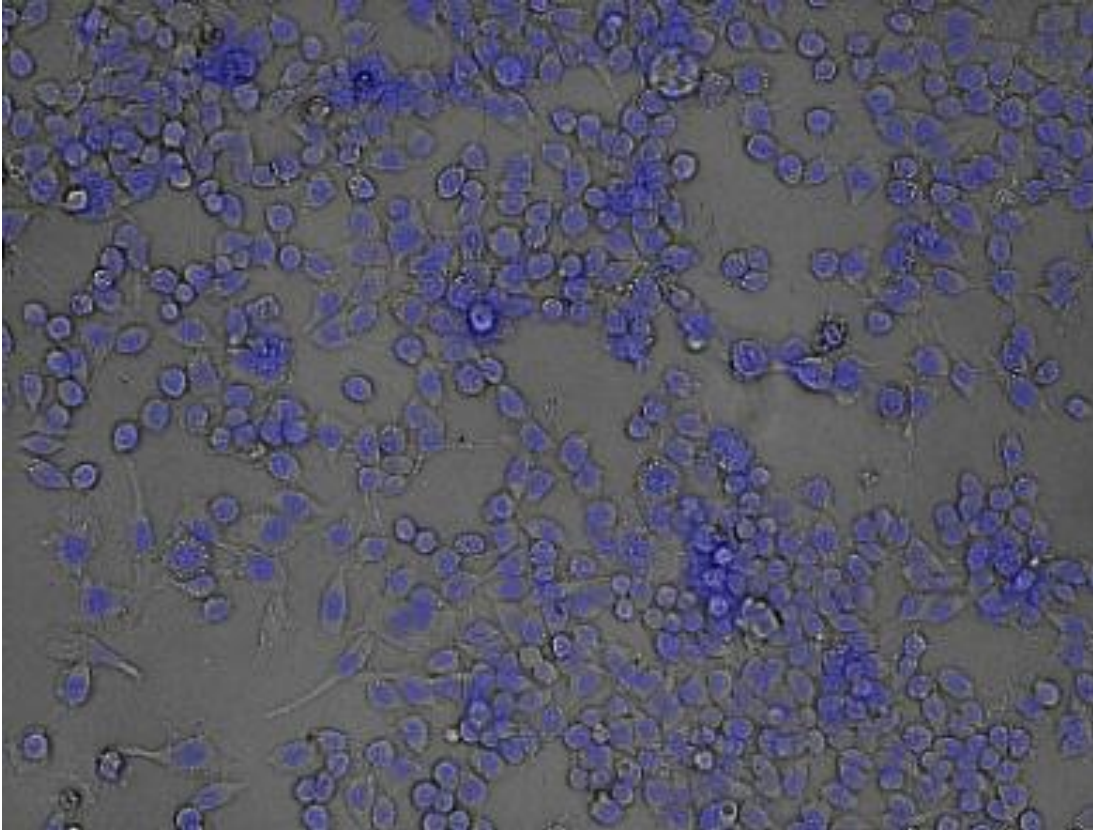
        set E=1
```



```
        goto start
    ) ELSE (
        IF %C% LSS %WELLP% (
            set /a C=C+1
            set D=1
            set E=1
            goto start
        ) ELSE (
            IF %B% LSS %COLUMN% (
                set /a B=B+1
                set C=1
                set D=1
                set E=1
                goto start
            ) ELSE (
                IF %A% LSS %ROW% (
                    set /a A=A+1
                    set B=1
                    set C=1
                    set D=1
                    set E=1
                    goto start
                ) ELSE (
                    echo DONE
                    pause
                )
            )
        )
    )
)
```

)

pause



Tiling

@echo OFF

set A=1

set B=1

set C=1

set D=1

set /p ROW=Number of rows:

set /p COLUMN=Number of columns:

set /p ZSTACK=Number of Z stacks:

set /p TIME=Number of time points:

set /a TIME=TIME+1

:start

IF %D% LSS %TIME% (

```
C:\PROGRA~1\IM\montage.exe> r0%A%c0%B%f02p0%C%-maskedch2ontoch1_sk%D%fk1fl1.tiff
r0%A%c0%B%f03p0%C%-maskedch2ontoch1_sk%D%fk1fl1.tiff r0%A%c0%B%f04p0%C%-
maskedch2ontoch1_sk%D%fk1fl1.tiff r0%A%c0%B%f06p0%C%-maskedch2ontoch1_sk%D%fk1fl1.tiff
r0%A%c0%B%f01p0%C%-maskedch2ontoch1_sk%D%fk1fl1.tiff r0%A%c0%B%f05p0%C%-
maskedch2ontoch1_sk%D%fk1fl1.tiff r0%A%c0%B%f07p0%C%-maskedch2ontoch1_sk%D%fk1fl1.tiff
r0%A%c0%B%f08p0%C%-maskedch2ontoch1_sk%D%fk1fl1.tiff r0%A%c0%B%f09p0%C%-
maskedch2ontoch1_sk%D%fk1fl1.tiff -tile 3x3 -geometry 1360x1024+0+0
r0%A%c0%B%p0%C%sk%D%tile.tiff
```

```
C:\PROGRA~1\IM\montage.exe> r%A%c%B%f02p%C%-maskedch2ontoch1_sk%D%fk1fl1.tiff
r%A%c%B%f03p%C%-maskedch2ontoch1_sk%D%fk1fl1.tiff r%A%c%B%f04p%C%-
maskedch2ontoch1_sk%D%fk1fl1.tiff r%A%c%B%f06p%C%-maskedch2ontoch1_sk%D%fk1fl1.tiff
r%A%c%B%f01p%C%-maskedch2ontoch1_sk%D%fk1fl1.tiff r%A%c%B%f05p%C%-
maskedch2ontoch1_sk%D%fk1fl1.tiff r%A%c%B%f07p%C%-maskedch2ontoch1_sk%D%fk1fl1.tiff
r%A%c%B%f08p%C%-maskedch2ontoch1_sk%D%fk1fl1.tiff r%A%c%B%f09p%C%-
maskedch2ontoch1_sk%D%fk1fl1.tiff -tile 3x3 -geometry 1360x1024+0+0
r%A%c%B%p%C%sk%D%tile.tiff
```

```
set /a D=D+1
    goto start
) ELSE (
    IF %C% LSS %ZSTACK% (
        set /a C=C+1
        set D=1
        goto start
    ) ELSE (
        IF %B% LSS %COLUMN% (
            set /a B=B+1
            set C=1
            set D=1
            goto start
        ) ELSE (
            IF %B% LSS %ROW% (
                set /a A=A+1
                set B=1
                set C=1
                set D=1
                goto start
            ) ELSE (
                echo DONE
                pause
            )
        )
    )
)
```

)

)

pause

Tiled Image

