Director of Research

Head of the Microbial Molecular Genetics Laboratory

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Curriculum Vitae

Research Staff

Christos Gournas: Researcher

Curriculum Vitae

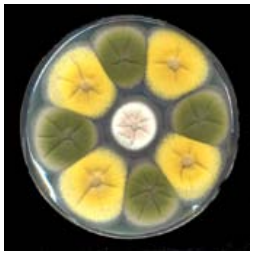
Ada Biratsi, Post-Graduate Fellow (PhD candidate)

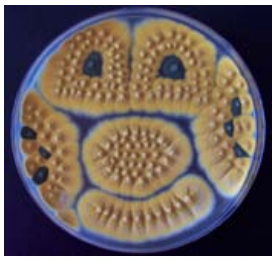
Mirsini Charicleous, Undergraduate Student (Diploma Thesis)

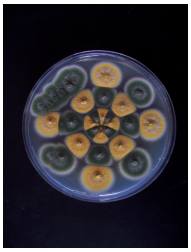
Loudres Arias Salazar, Erasmus student

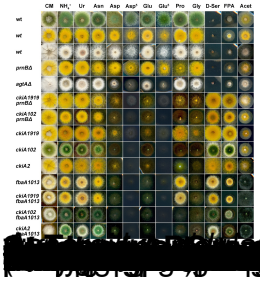
Research Interests

Our group is primarily interested in several aspects concerning: 1) regulation of expression, structure-function relationships, specificity, cell biology and evolution of amino acid transporter proteins and 2) the lateral organization of the fungal plasma membrane. Our model organism of choice is the non-pathogenic ascomycetes *Aspergillus nidulans*, a classic model genetic system since the 1950's. Two *A. nidulans* amino acid transporters have been cloned and studied in detail in respect to their transcriptional, post-translational/functional and cellular control of expression. In addition, we have introduced *A. nidulans* as a novel model system for the expression and/or functional characterization of heterologous transporter genes (Argyrou et al. 2001). In parallel, the last 7 years we have been studying the lateral compartmentation of *A. nidulans* plasma membrane and how this organization is implicated in different cellular processes. In particular we are focusing on “eisosomes” static plasma membrane compartments that constitute nanoscale furrow-like invaginations of the plasma membrane, where proteins and lipids segregate and their implication in fundamental cellular processes (sphingolipid biosynthesis, endocytosis of membrane proteins, function of efflux pumps and fungal pathogenicity).








CM
Ur
Asn
Asp
Glu
Pro
Gly
D-Ser
FPA
Acet
wt
wt
wt
pmiB∆
agtA∆
cskA1919 pmiB∆
cskA102 pmiB∆
cskA1919
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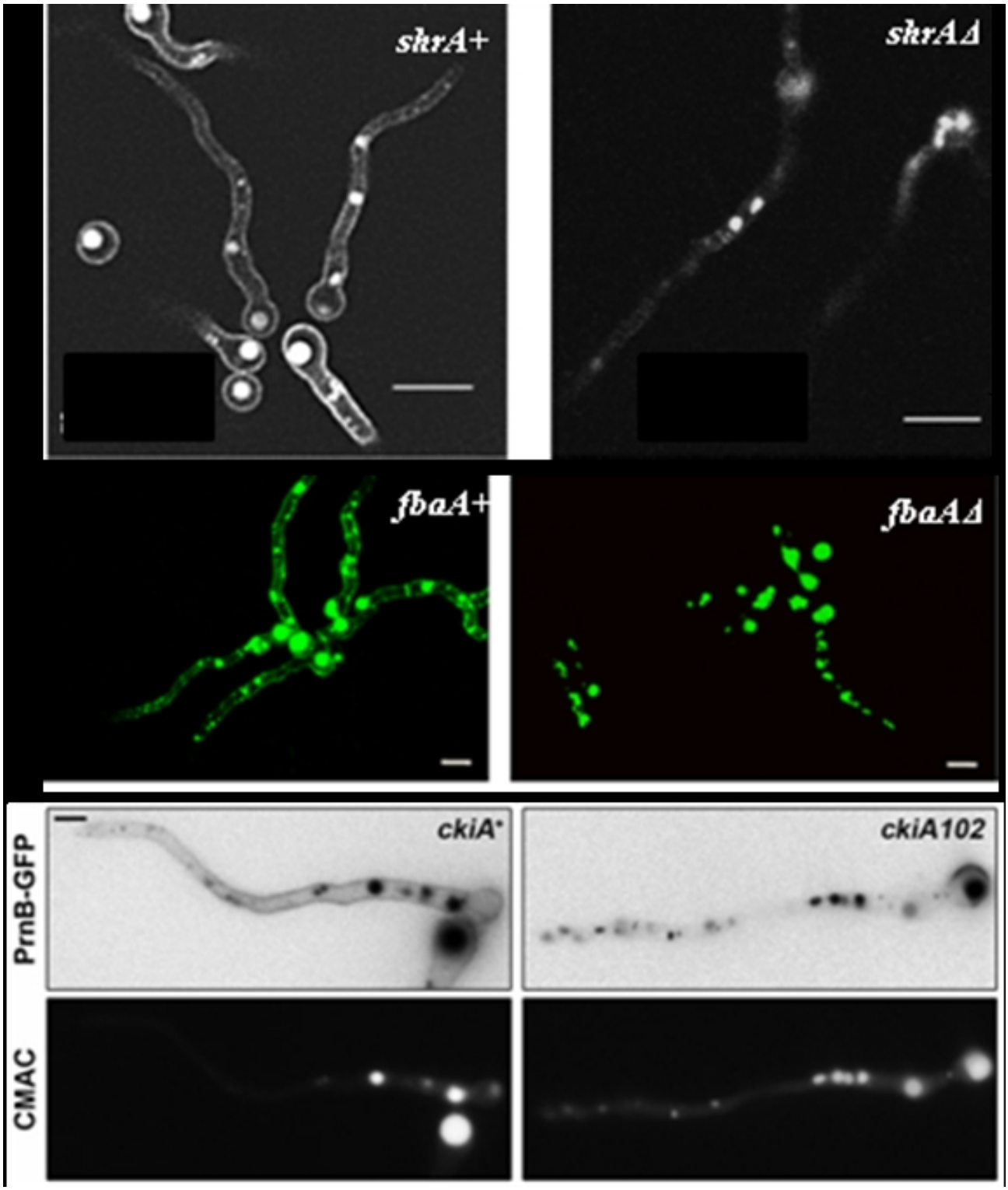
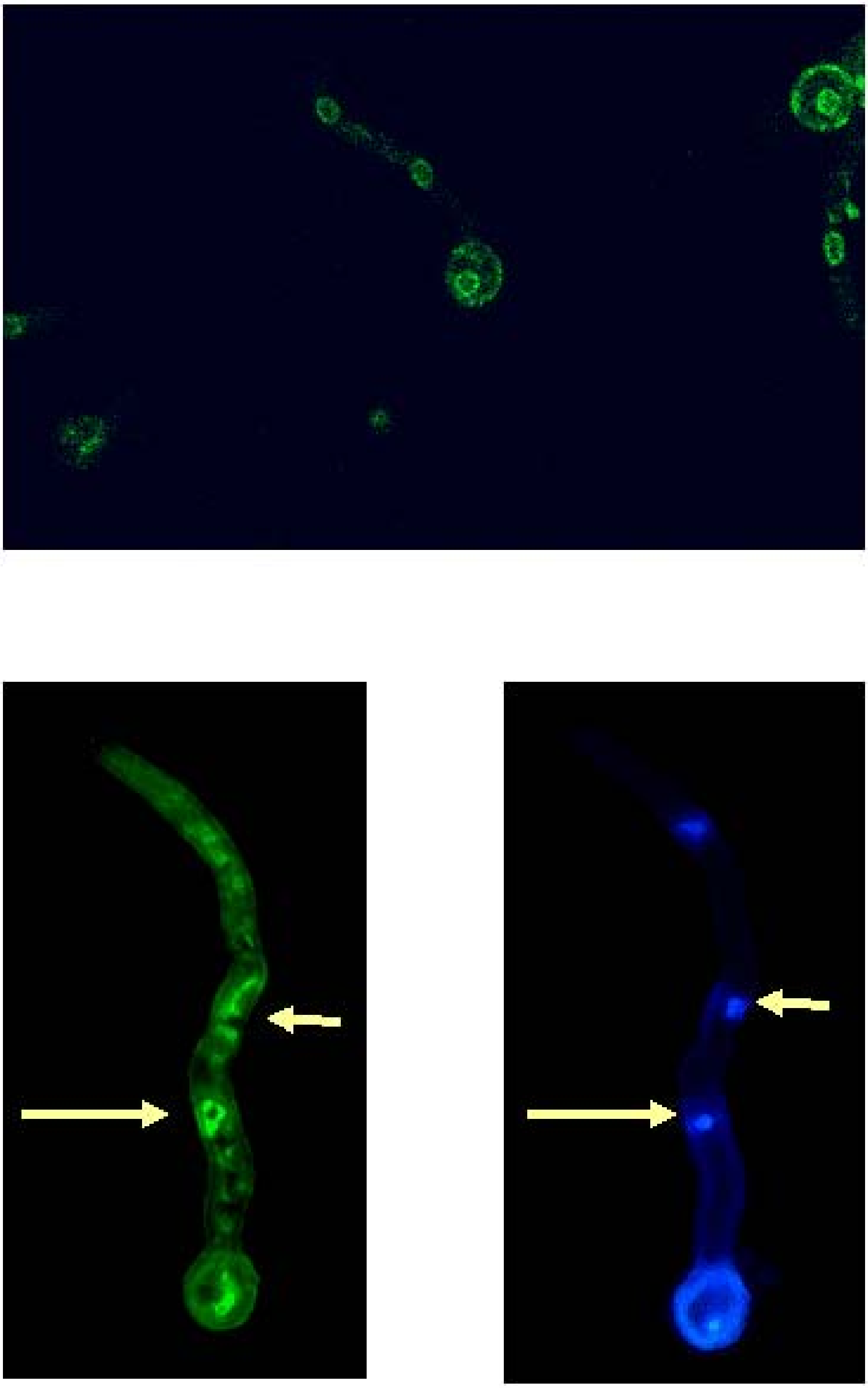

shrA+
shrAΔ
fbaA+
fbaAΔ
PrnB-GFP
CMAC
ckiA*
ckiA102



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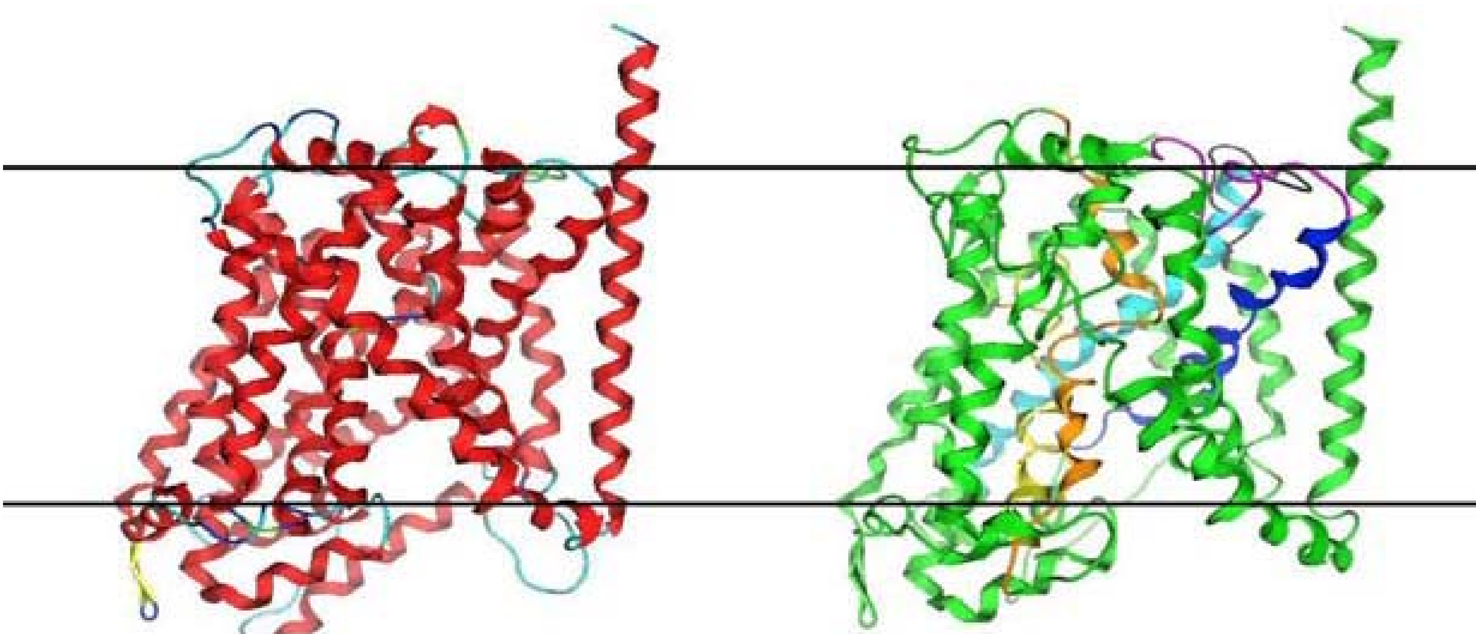

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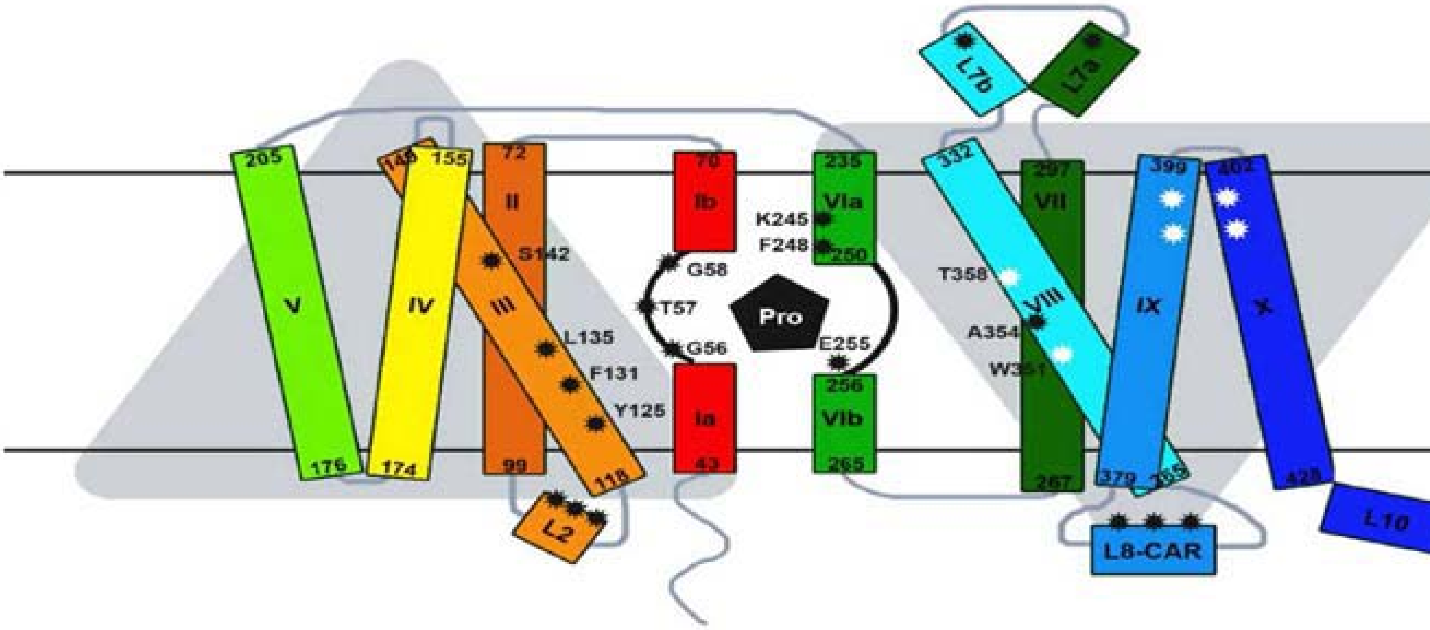
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L7a
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V
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II
Ib
VIa
VII
IX
X
III
VIII
S142
K245
F248
250
G58
T358
T57
Pro
L135
A354
G56
E255
F131
W351
256
Y125
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L8-CAR
L10

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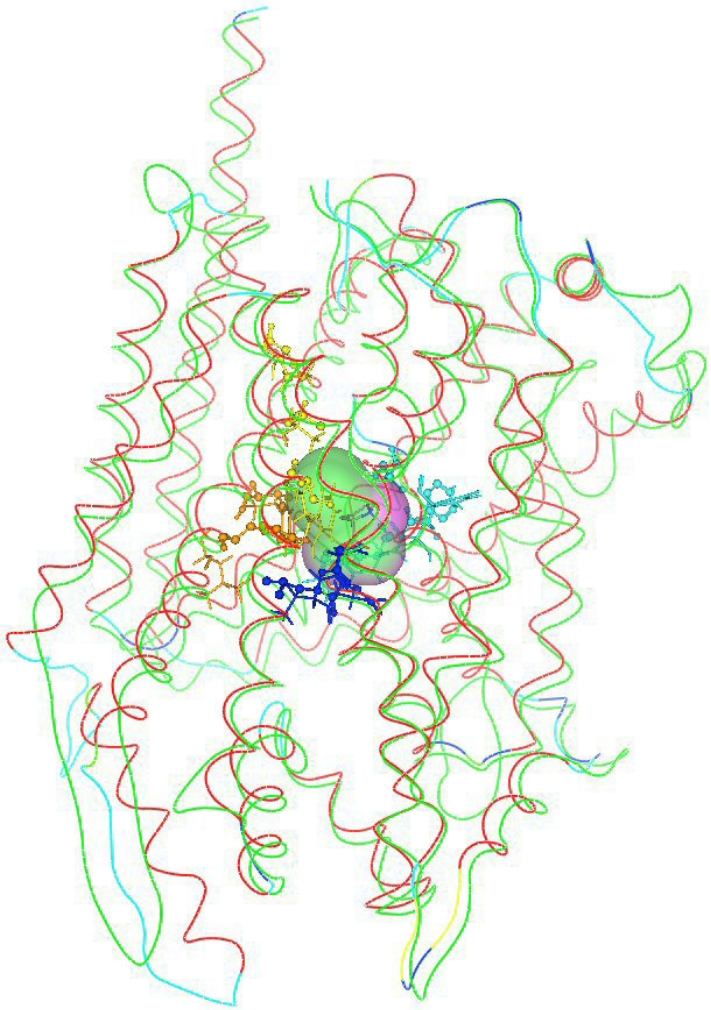

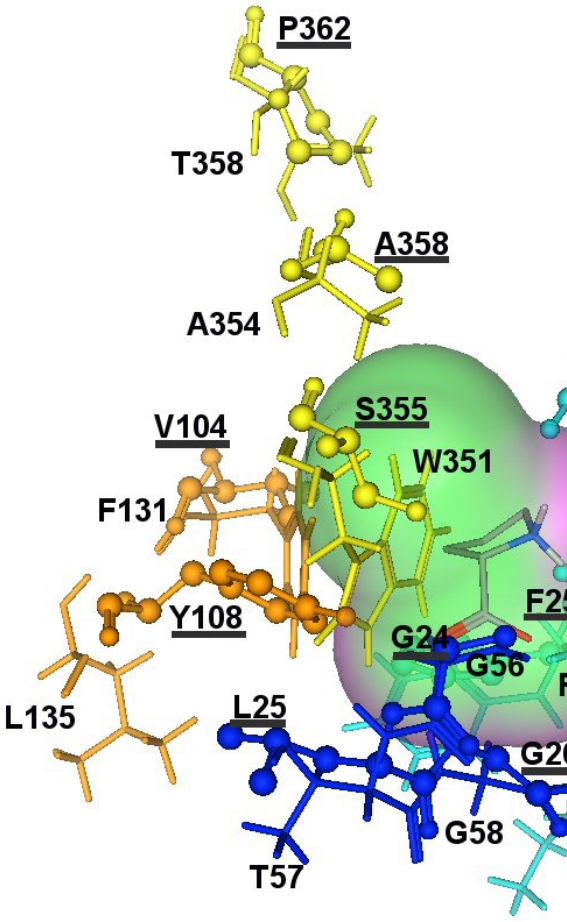
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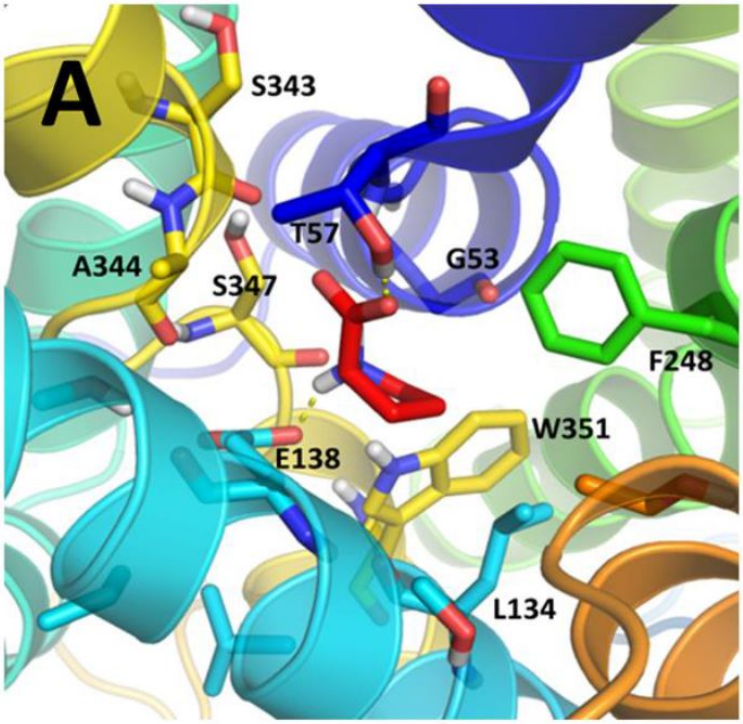
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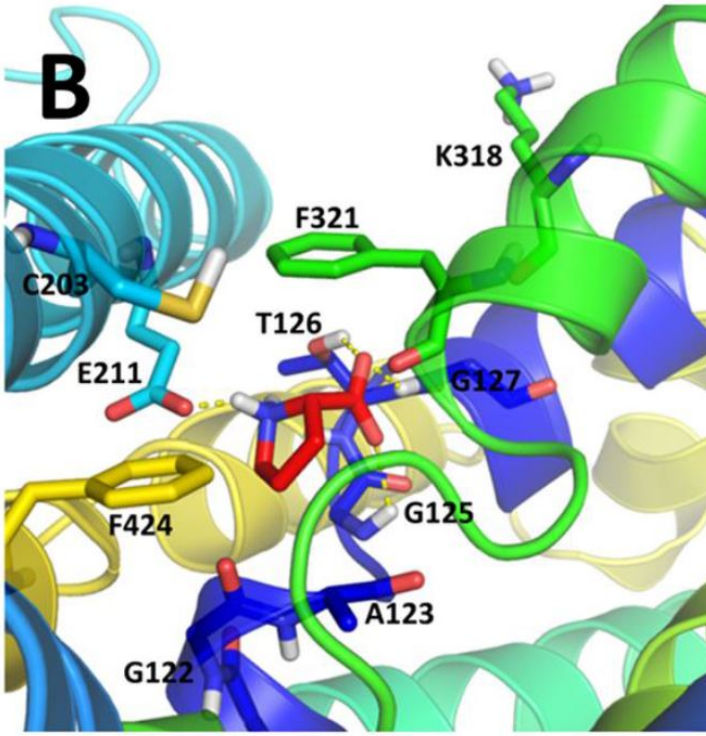
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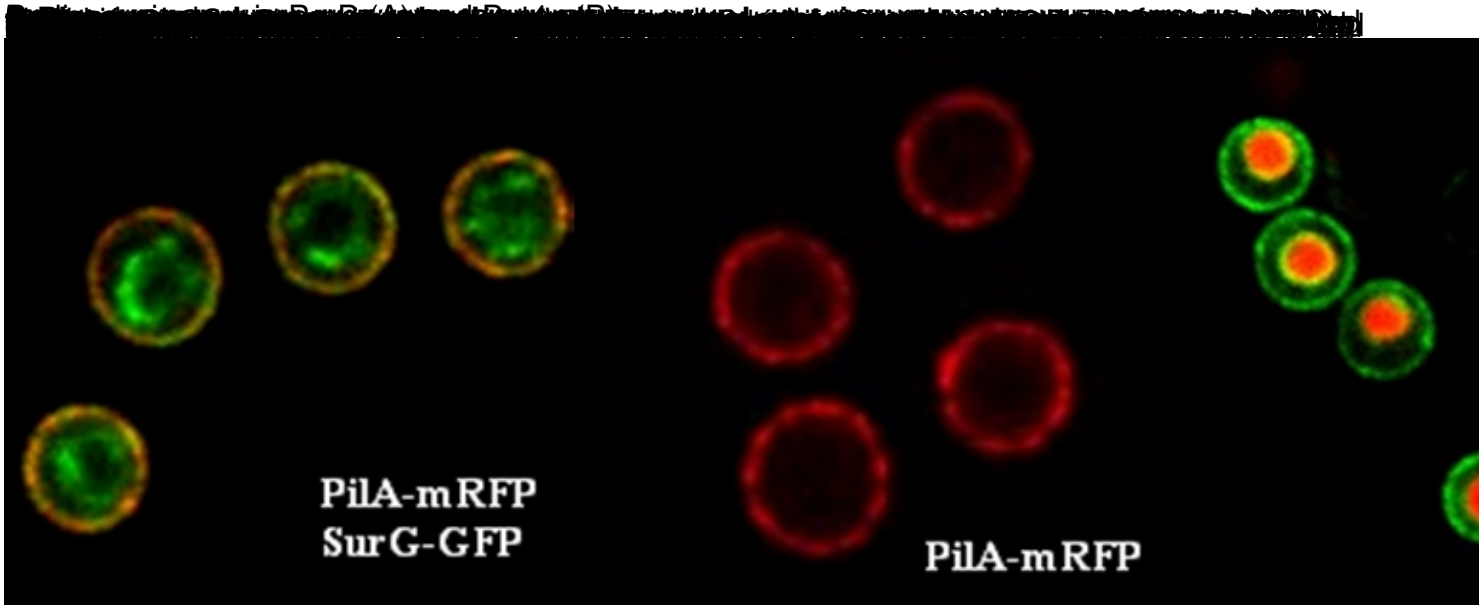
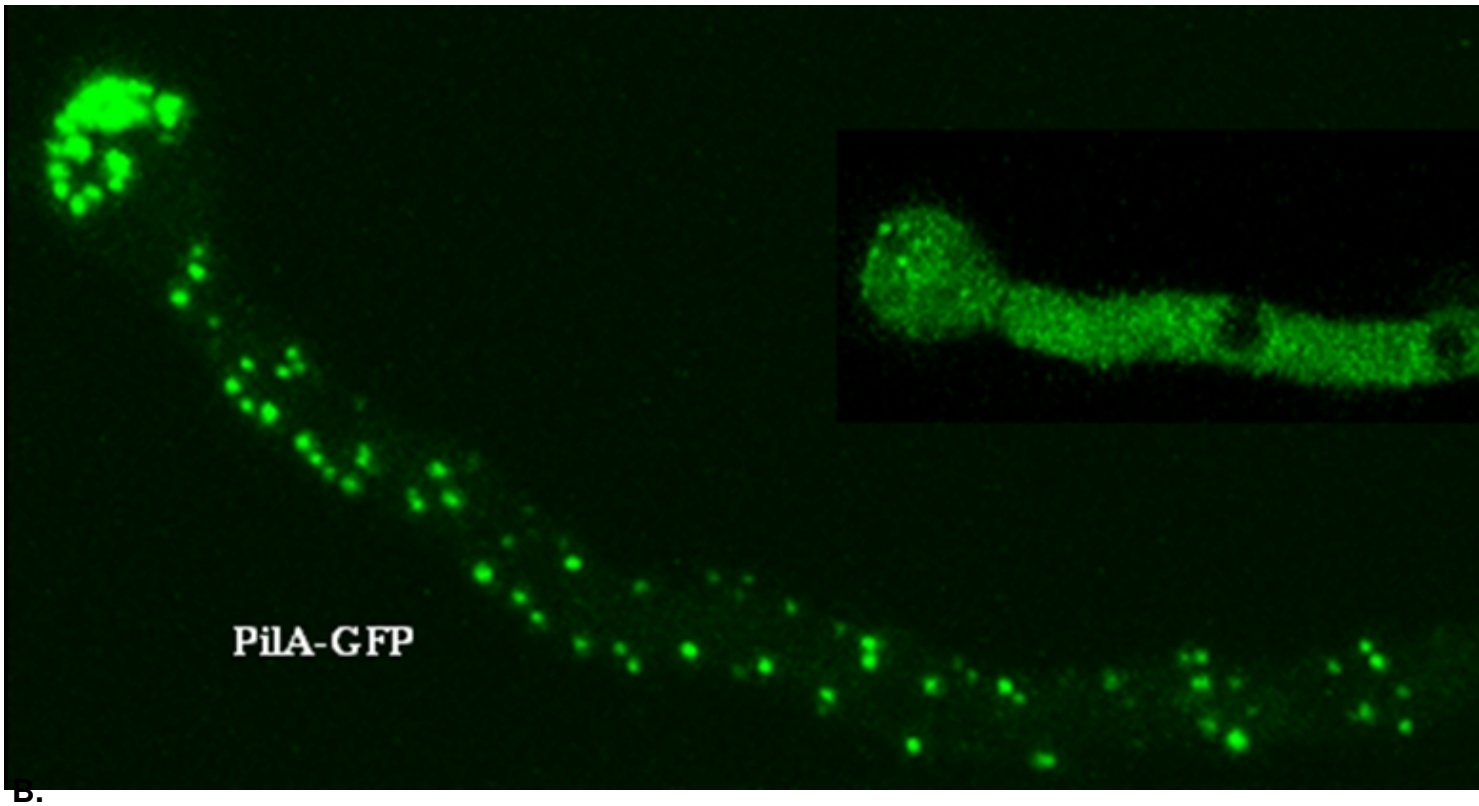
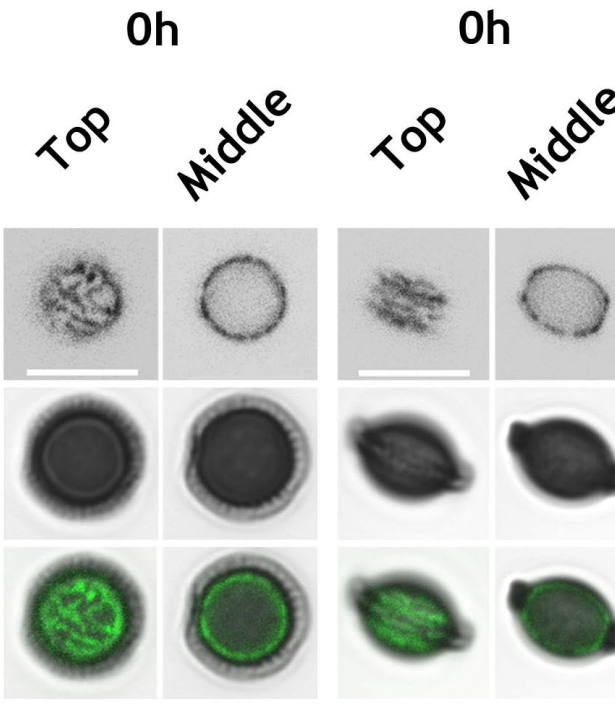
A123
G122

PrnB Put4p


PilA-mRFP
SurG-GFP
PilA-mRFP


PilA-GFP

B.


0h
0h
Top
Middle
Top
Middle
Fluorescence
Phase Contrast
MERGE