

$t^*(\text{A Day In Life}) = (\infty)$
 Med Student(μ) \cong Physician Scientist(π)

$$\mu\pi^t = \begin{bmatrix} \vdots & \ddots & \vdots \\ \vdots & \ddots & \vdots \\ \vdots & \ddots & \vdots \end{bmatrix}$$

Liran Shlush (מנהל בית הספר)
 WIS Mar 2025

How will your day look???

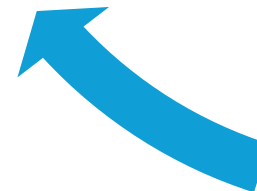
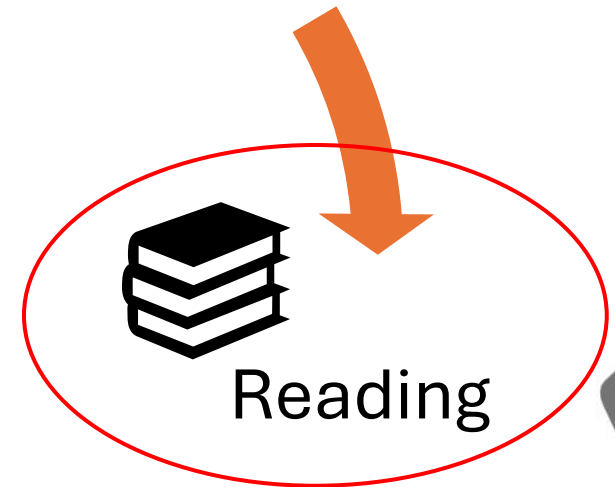
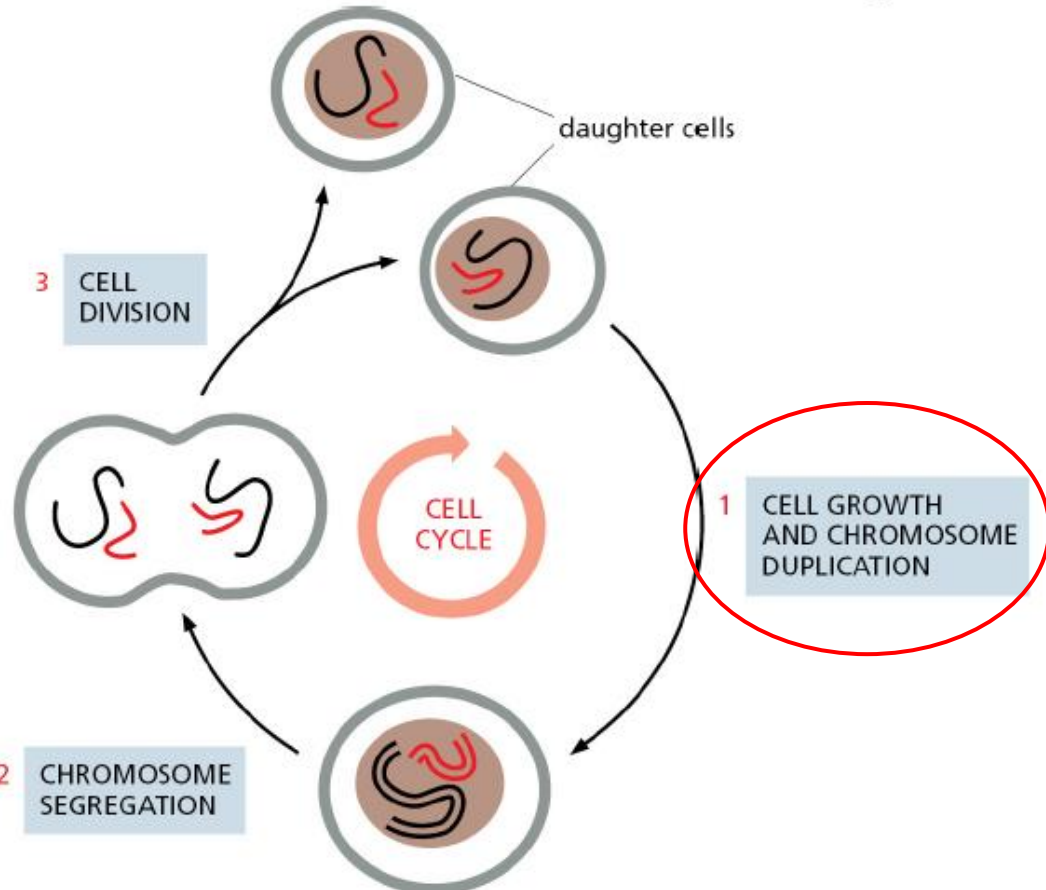
- Imagine it now before I tell you
- Send your imaginary day to this number 0505109815
- You have 1 minute (deadlines are critical for $\mu\pi$)
- I give my number to my patients also and they respectfully use it
- 90% of the time I was happy they used it.

Med Student(μ) \cong Physician Scientist(π)

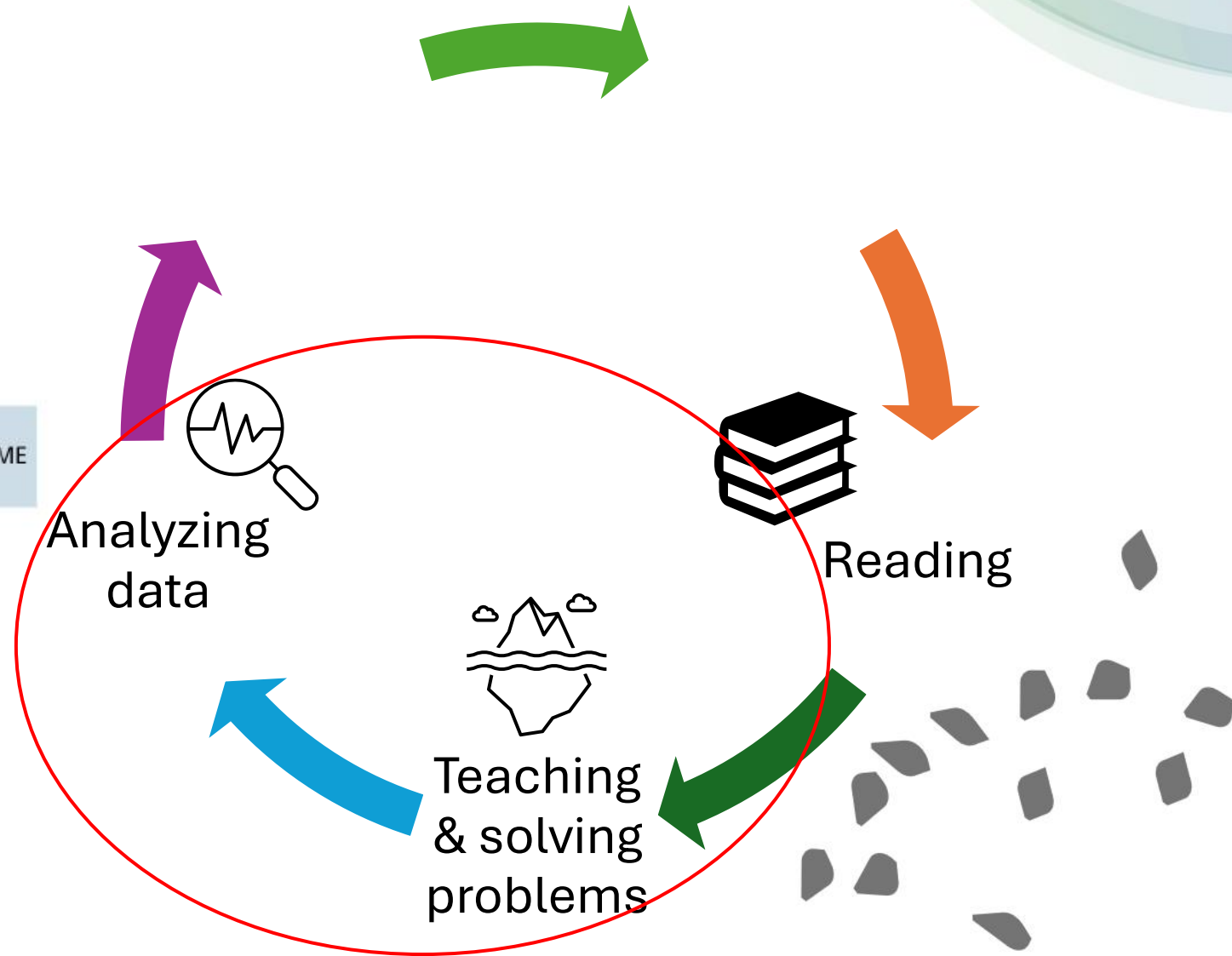
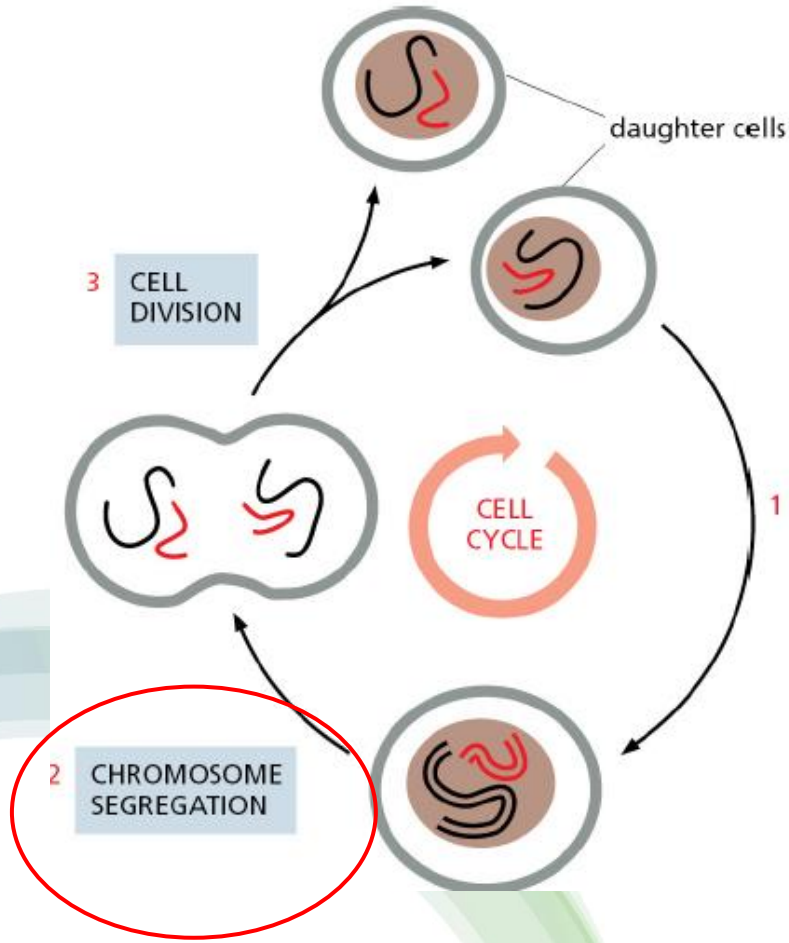
- You are both μ and π from day one !
- So, you will do what μ do + what π
- You will do it 5 days a week (you must come)



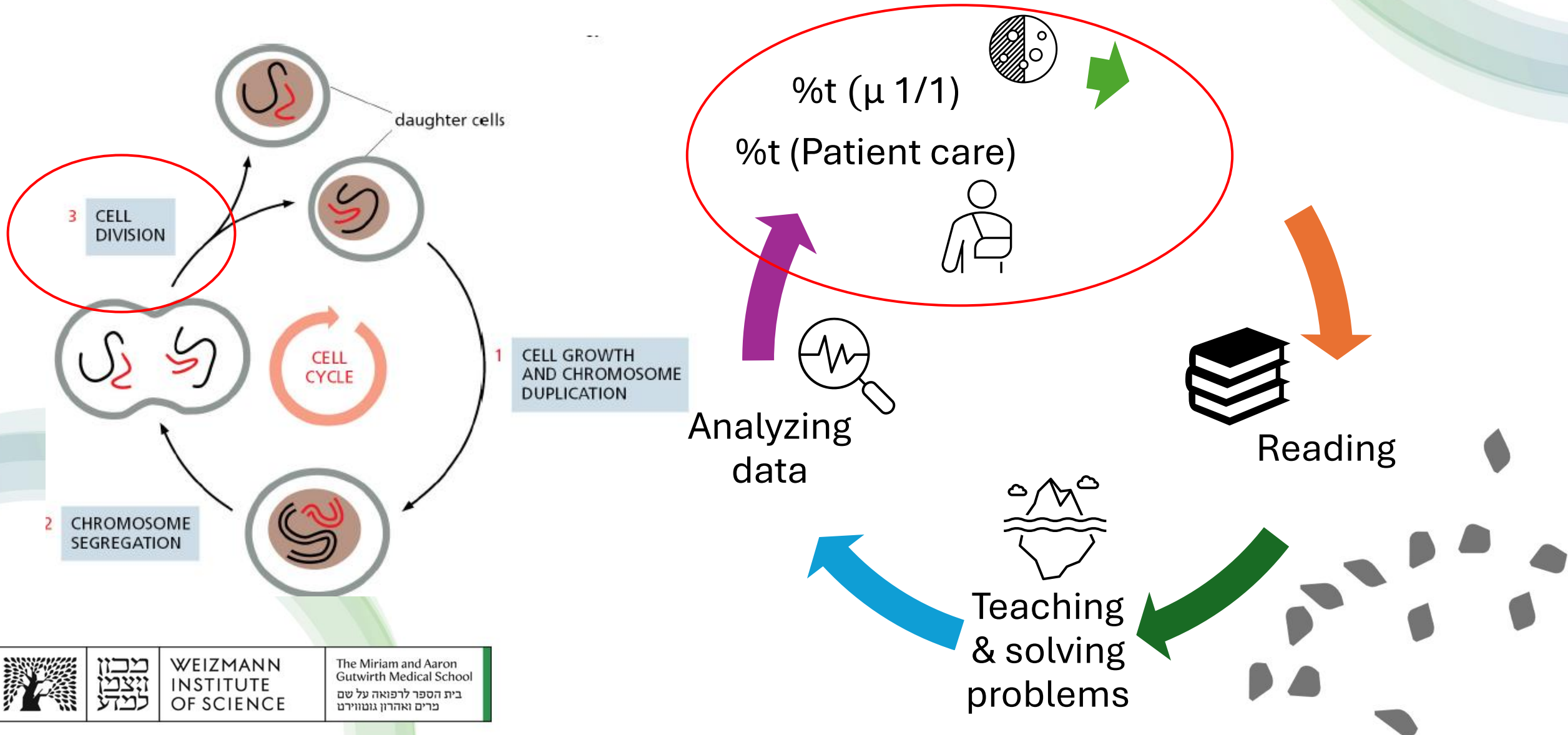
The day cycle of $\mu\pi$



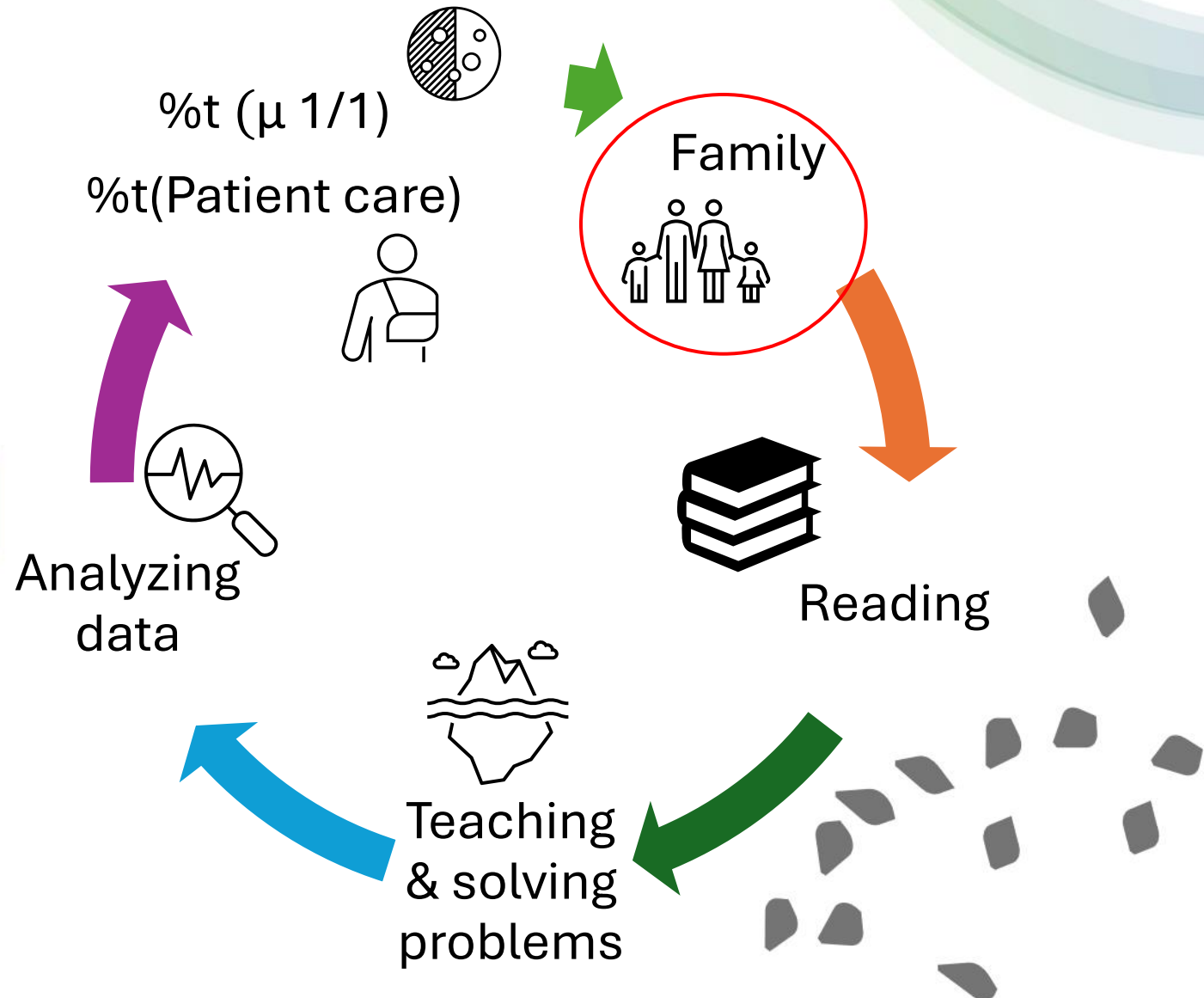
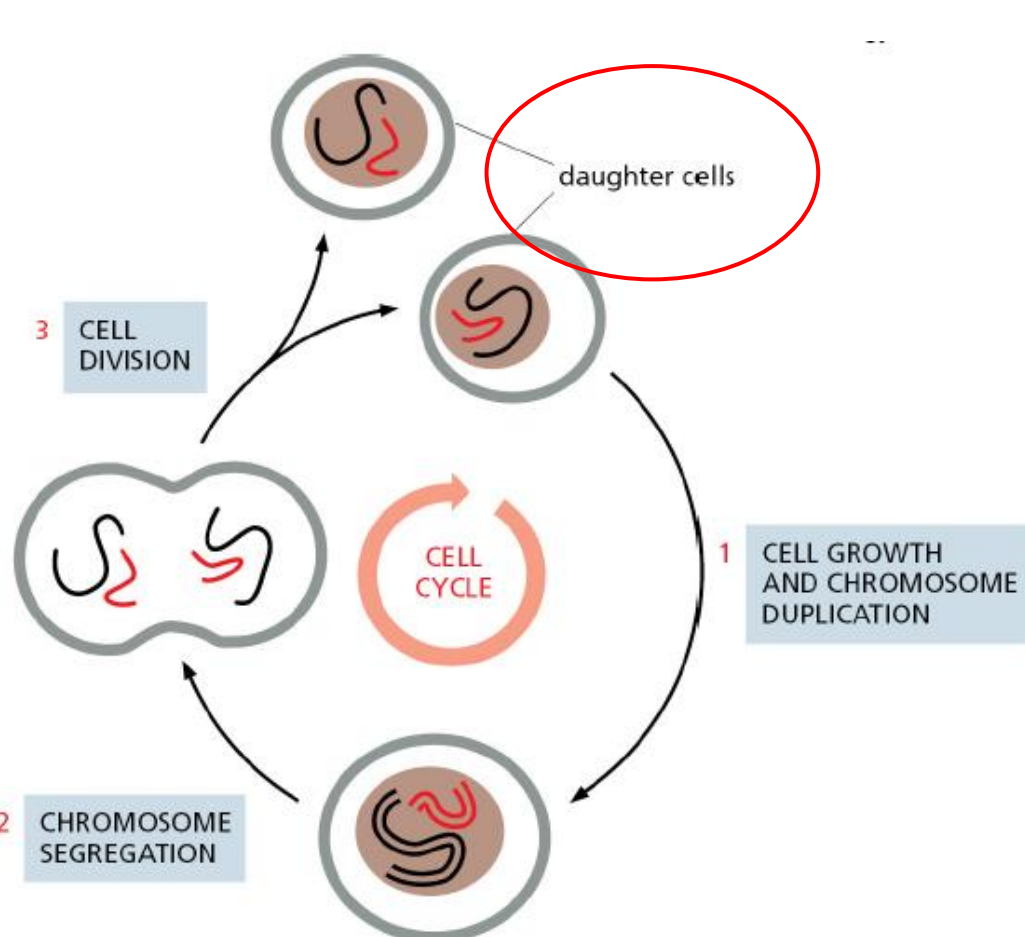
The day cycle of $\mu\pi$



The day cycle of $\mu\pi$



The day cycle of $\mu\pi$



Now let's add details but not too much

- Because this is what $\mu\pi$ do they dig and dig but not too deep???
- Primum non Nocera (don't start a volcano)

- Make decisions



- We  digging but your patients and students need



Decisions/Actions and Basic Knowledge

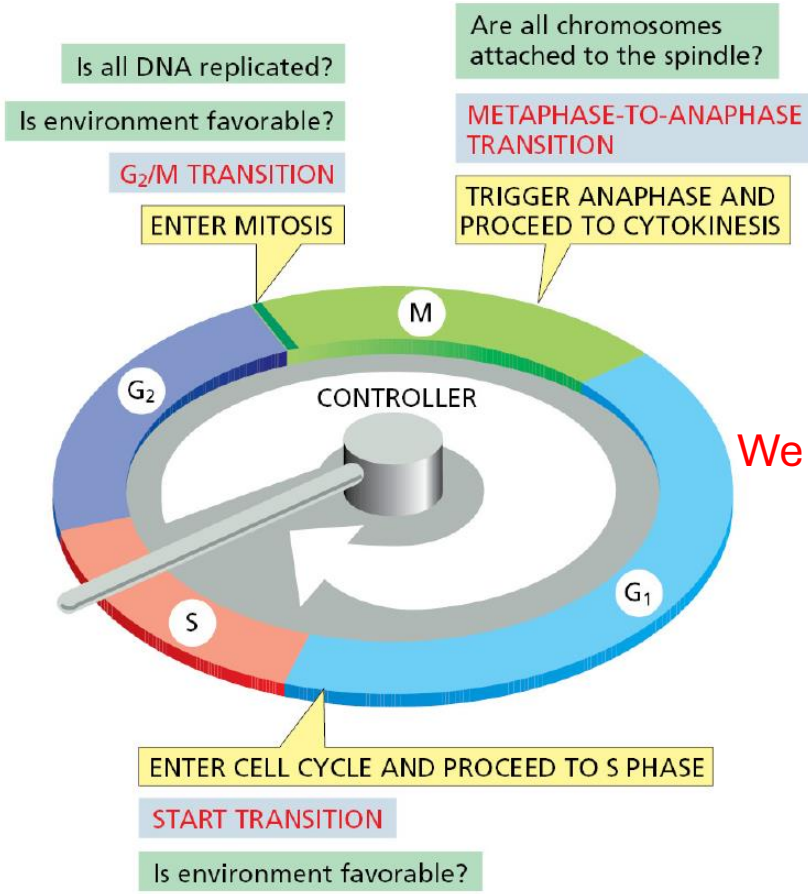


Find your controller

Always ask questions???



The most important question of all WHY



We will teach you how to ask questions
During PBLs and RBLs



Nice question



הרפואה

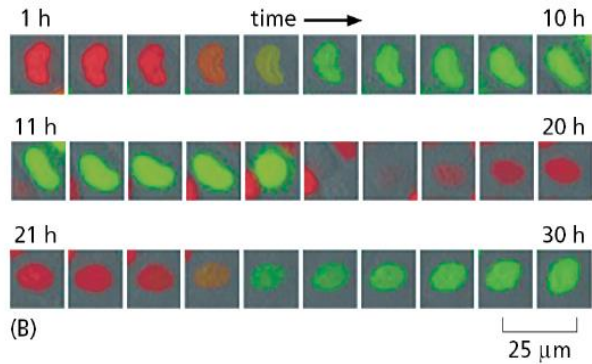
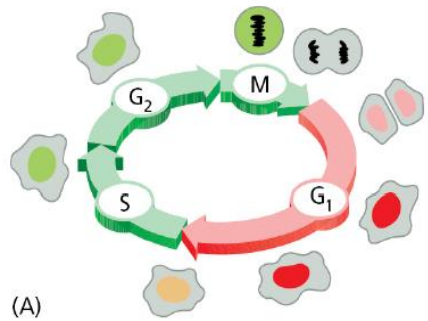



Nature Medicine



Nobel prize

How to divide your time (resources)

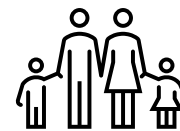


%t (μ 1/1) 
 %t(Patient care)

2-3Hs



Family (All the rest)



Reading

2-3Hs

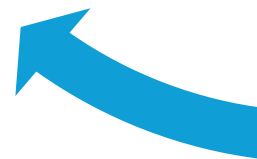
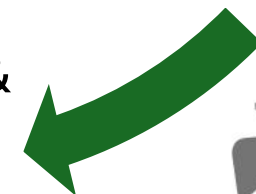
Analyzing data

2-3Hs



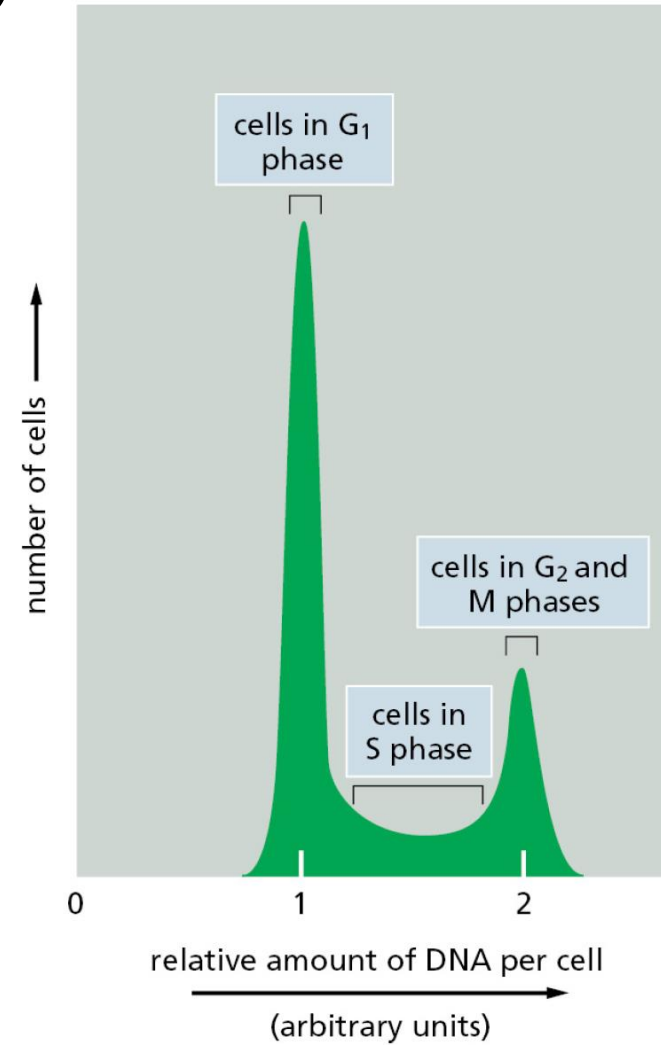
Teaching & solving problems

2-3Hs



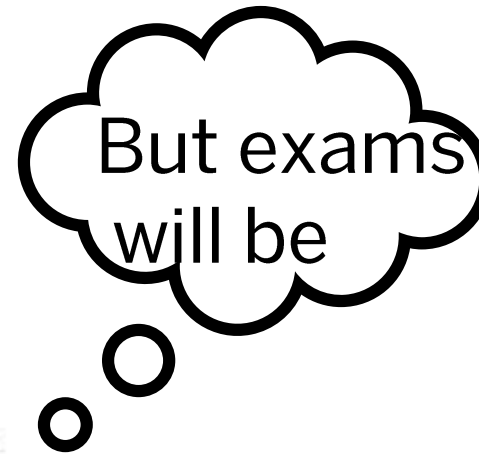
There is a wide distribution for how much time to spend in each step of the cycle

- This will change:
- From year 1-7
- From residency to postdoc
- When your wife is angry
- But remember
- $t^*(\text{A Day In Life}) = (\infty)$



Now let's be a bit more practical

- As you noticed the $\mu\pi$ is not always practical
- Not everything you will learn is for the exam



What will you see the first thing you come to school?



You will see Us
but something is awkward in the picture?

$n_{\text{Teachers}} \sim 100 \gg n_{\mu\pi} \sim 30 - 40$

Small Groups Reading Together 2-3H

- We will give you tools for group reading
- In the future you will be able to read together even from 2 different continents
- דף גמרא (רופא חוקר) יומי כדרך חיים
- Readiness assessment

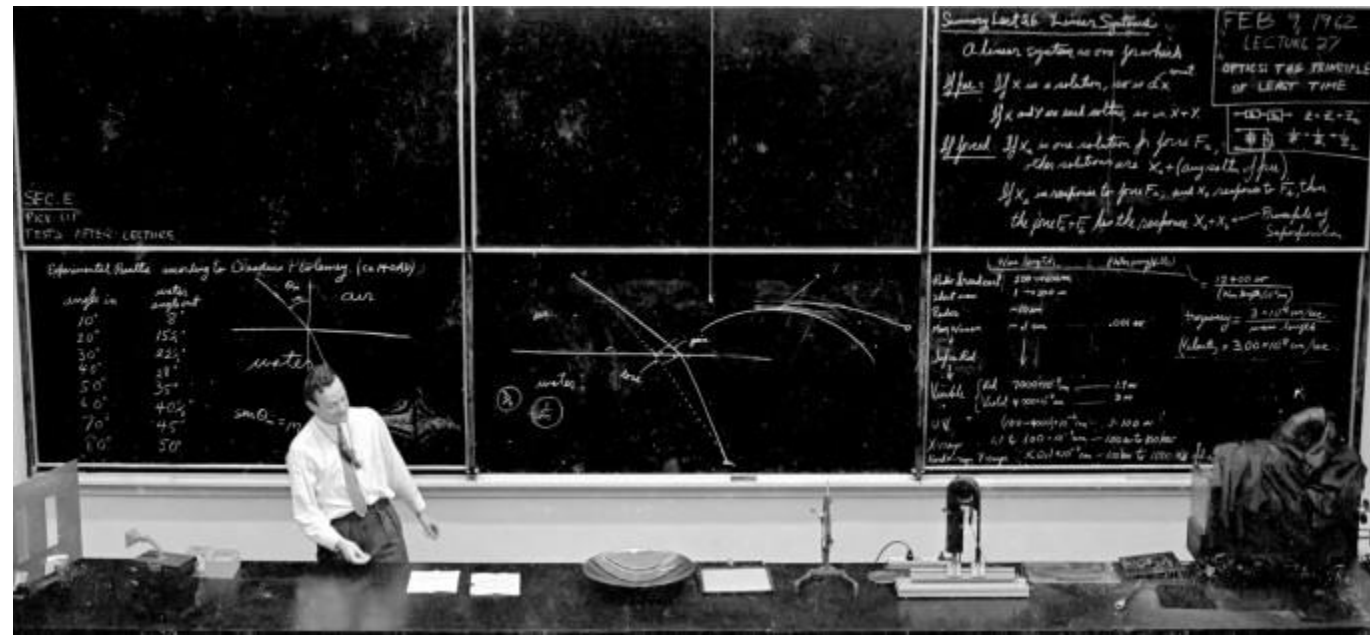
ANN
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NCE

The Miriam and Aaron
Gutwirth Medical School
בית הספר לרפואה על שם
פרים ואהרון גוטוויירט



Lectures 45min (30+15)

- Beginning and end of day
- Visionary
- Opinion
- Summary talks
- From experts



Solving Problems (data) after reading

This is the bone marrow

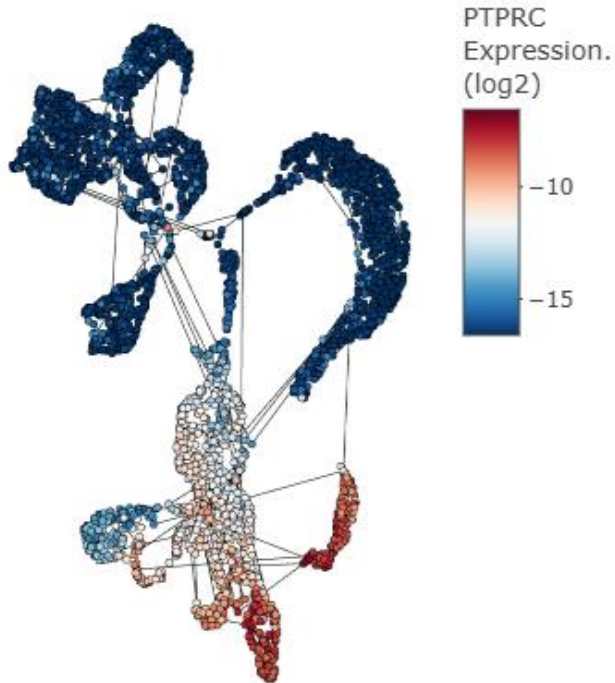
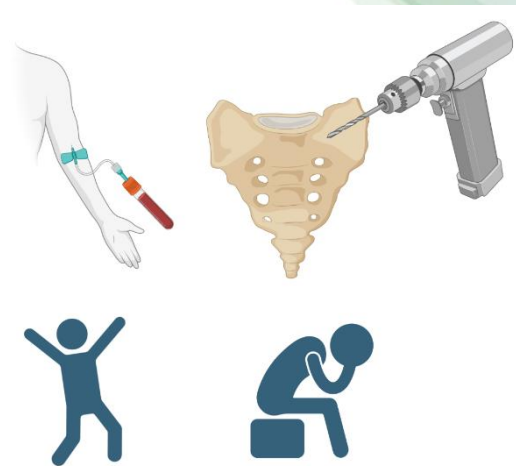
You will answer:

Which cells reside in the marrow

Why they are in the marrow

What do they do

- Tools
- Asking Questions
- Knowledge
- Solving problems
- PhD
- Had fun



```

1. Setup

%time
import anndata as ad          # For reading/writing AnnD
import matplotlib.pyplot as plt # For plotting
import metacells as mc       # The Metacells package
import numpy as np           # For array/matrix operati
import pandas as pd          # For data frames
import os                     # For filesystem operation
import seaborn as sb         # For plotting
import scipy.sparse as sp     # For sparse matrices
import shutil                 # for filesystem operation
from math import hypot        # For plotting
from typing import *          # For type annotations

import scanpy as sc           #Tal added for uploading r
import gzip                   # the gzip module is used
import scipy.io               #The scipy library provide
    
```



Your Clinic

- Once a week for a full day
- You will see patients
- You will care (not immediately take care)
- You will ask questions
- You will acquire practical tools
- You will learn from others what it means to be $\mu\pi$



Day 1 Blood System

Hour	Day 1
8:00	Lecture: The design principals of the bone marrow
9:00	Group Reading
10:00	Group Reading
11:00	Group Reading + 10 Min exam
12:00	Lunch
13:00	Research Based Learning (single cell RNA sequencing of the bone marrow)
14:00	Research Based Learning
15:00	Research Based Learning
16:00	Research Based Learning
17:00	Home



מכון
ויצמן
למדע

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מרים ואהרון גוטוויירט

Now after you had so much fun what to do in the rest of your time?

Liran "you probably want more of the same
Otherwise, **why** to do it from the start?"

שי "נפש בריאה בגוף בריא"



תזודה רבה

$$\bullet \mu\pi^t = \begin{bmatrix} & \dots & \\ \vdots & \ddots & \vdots \\ & \dots & \end{bmatrix}$$

