

# How to become a leader in a scientific field



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|                                     |                         |
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| <input type="checkbox"/>            | No, nothing to disclose |
| <input checked="" type="checkbox"/> | Yes, please specify:    |

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|---------------------|--------------------------------|---------------------------------------|----------------------------|------------------------------|----------------------|---|-----------------|-----------------------------------|
| Genzyme             | X                              | X                                     |                            |                              |                      |   |                 |                                   |
| Novartis            | X                              |                                       | X                          |                              |                      |   |                 |                                   |
| Bayer               | X                              |                                       | X                          |                              |                      |   |                 |                                   |
|                     |                                |                                       |                            |                              |                      |   |                 |                                   |

## **Learning Objective:**

**To identify whether there is  
one golden path or various routes  
to become a leader in a scientific field.**

# Key messages:

**There are many roads to Rome.**

Without regrets, recall *“The Road Not Taken”* .

[Robert Frost, 1916, first poem in the collection *Mountain Interval*].

**Yet, do not sigh over an attractive alternative rejected.**

[Thompson, Lawrence (1959). *Robert Frost*. Minnesota: University of Minnesota Press]

**As such, “I did it my way”**

**How did some of the forefathers  
of modern medicine  
become  
“leaders in the field”  
??**

# *Jean-Martin Charcot*

*29.09.1825 - 16.08.1893*

## **Founding father of modern neurology**

“Symptoms, then, are in reality nothing but the cry from suffering organs.”

*Jean-Martin Charcot (29.09.1825-16.08.1893)*

French neurologist and professor of anatomical pathology

One of the world's pioneering neurologists

Associated with at least 15 medical eponyms

(e.g. Charcot-Marie-Tooth disease & Amyotrophic Lateral Sclerosis. Multiple Sclerosis)

Considered as the **'Napoleon of Neuro-Sciences'**

Sigmund Freud was trained under his supervision.

# Father of psychoanalysis

**Sigmund Freud**

(06. 05. 1856 – 23.09.1939)

**Austrian neurologist**

**Development of psychoanalysis**

**Development of various  
therapeutic techniques**

*(e.g. free association & transference)*

**Renovative theory about**

**sexuality, dreams &**

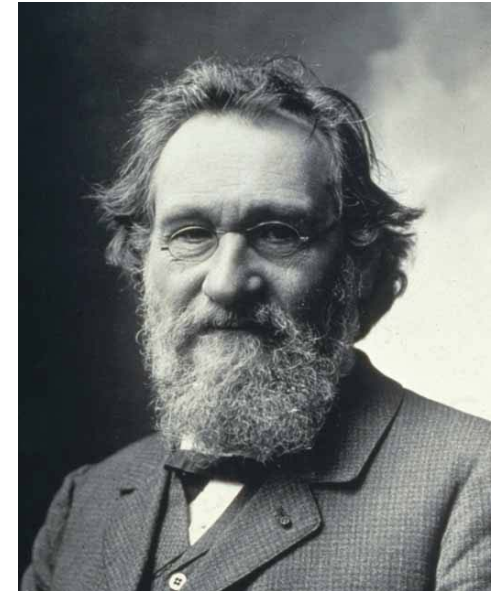
**unconsciousness**

**“I will not stop trying, and  
you know, what one tries  
frequently and always  
wants, will finally lead to  
success”**

*--- in a letter to Martha Bernays, his wife*

# Élie Metchnikoff (Илья Ильич Мечников)

## Father of Natural Immunity



- discovered phagocytes (macrophages) in 1882  
*which was major defence mechanism in innate immunity*
- established the concept of cell-mediated immunity
- **the Nobel Prize in Physiology or Medicine in 1908** (16.05.1845 – 16.07.1916)  
*-----"in recognition of their work on immunity" together with Paul Ehrlich*
- honorary degree from the University of Cambridge & the Copley Medal of the Royal Society in 1906
- Odessa I.I.Mechnikov National University (*in the Ukraine*) named after him



## Be a great communicator

Know what you're talking about

Be clear

Have an open mind

Ask questions, seek counsel

Shut-up and listen

## Make great decisions

Be analytical and think critically

Hear your intuition

Avoid procrastination

Make things happen

Always have a back-up plan

*To communicate oneself is Nature;  
to receive a communication as it is given is Culture.*

*Johann Wolfgang Goethe*

*All in the life is a matter of choice,  
that starts with nipple or tit, that ends in the oak or the pine.*

*Pierre Desproges*

# Share your passion

Be a great teacher

Enjoy what you do

Lead by example

Challenge people to think

Let others express themselves

*Success consists of going from failure to failure  
without loss of enthusiasm.*

*Winston Churchill*

consider scientific work not as a burden, but as **the source of joy**

In the long & hard march, **strong willpower** is mandatory

find **passion** for science in your soul and ignite it

**inspire** the passion for science in **others**

have **ambition** to succeed in science

**Never ever give up**

Have **Persistence**

# Passion

To learn to feel and cultivate the passion for imagination and creation.

Think life, work and other human activities as dynamic rather than stereotyped repetitive processes that are destined to be replayed.

# Vision

To develop acuity for scientific areas, especially interdisciplinary areas which are either concerned with the basic principles of nature or solve the most prevalent problems of the human being.

# Charisma

To develop the character that frees people's mind, reminds people of the shortcomings and impresses people with the attitude.

# Persistence

To develop the habit of persistence, and realize that perfection is almost the enemy of time. It is only efficiency that helps them to achieve compromise.

# Answer from Prof. Alla Guekht, Moscow, Russia

## Director of Moscow Research & Clinical Center for Neuropsychiatry

**Dear Max,**

...to make the long story short, I would mention the following ingredients:

**Good mentors** (I was very fortunate to have excellent mentors from my first steps in Neurology,  
I am happy to learn from them all my life, and I am always paying tribute to them)

**Willingness to listen and to support your team members and pupils.**

**Learning by doing, learning by reading, learning by listening.**

**Strong team of colleagues, competitive and friendly.**

**Dedication to translational research .**

**International collaboration.**

**Good clinical facilities.**

**Understanding and supportive family**

(I am very much grateful to my husband, my parents and children for their invaluable support, help and patience)

**Kindest regards,**

*Alla Guekht*

# Answer from Prof. Philip A. Low, Mayo Clinic

## Recognition

- Robert D. and Patricia E. Kern Professor of Neurology
- Former Chair, Division of Clinical Neurophysiology
- Founder of the Mayo Autonomic Reflex Laboratory

## Training experience

- Born in the Fiji Islands
- Clinical training at St. Vincent's Hospital
- Research doctorate under Professor McLeod in Sydney
- Peripheral Nerve fellowship with Peter Dyck, 1976, Mayo Clinic

Dear Max,

...in terms of advice, what I followed was:

- ~ **Get the right training.**
- ~ **Think out of the box, develop a vision and stick with it.**
- ~ **Remember that you will not have all the answers, therefore you must amplify your contributions...**

...You do this in 2 ways:

- ~ First you train bright minds who can do better than you.
- ~ Second you develop infrastructure which can generate answers you might not be able to provide.

Best,

*Phillip A. Low*



## **A good friend, a great neurologist, teacher and mentor:**

**Dear Max,**

Here are a few keywords regarding my basic ideas, at least from my own point of view:

**Neurology is all about patients.**

My interest in science came from individual cases, which needed solutions.

**General Concept: “ More matter, less art ”**

*(William Shakespeare)*

**“ Everything is politics ”**

*(Dr . D. M. Palatucci, Advocacy Leadership Forum)*

**Communication is important.**

**Coworkers are important - teamwork is needed.**

**Needed from mentees:**

**interest and creativity,**

**self-responsibility,**

**authenticity,**

**resilience,**

**loyalty.**

**Prof. Vladimir Hachinski, CM, MD, FRCPC, DSc,  
Doctor honoris causaX4  
University of Western Ontario, London, Canada**

**Recognition**

- Distinguished University Professor of Neurology
- Past Richard and Beryl Ivey Chair of the Department of Clinical Neurological Sciences
- Past-President of the World Federation of Neurology

**Training experience**

- MD from the University of Toronto
- Clinical training in internal medicine and neurology in Montreal and Toronto
- Research research in London, U.K. and Copenhagen

# PRINCIPLES



1. DO WHAT YOU LOVE TO DO

& LEARN TO LOVE WHAT YOU HAVE TO DO

2. COLLABORATE

3. LEARN TO HANDLE REJECTION

# Sometimes it takes a crooked path...

Anesthesia

Intensive Care Unit

Otorhinolaryngology

Neurology

Psychiatry

Clinical Neurophysiology

Psychotherapy

Neuro-ICU

Quantitative Sensory  
Testing

**Familial Dysautonomia**

**Peripheral Autonomic  
Nervous System**

**Central Autonomic  
Nervous System**

...to reach your goals