

How to plan a clinical career in neurology

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Immanuel Kant

Categorical Imperative:

I am never to act otherwise
than so that I could also
will that my maxim should
become universal law.



22.4.1724 – 12.2.1804
Königsberg (Russia)

Bernardo di Niccolò Machiavelli

- "There is nothing more difficult to take in hand, more perilous to conduct, than to take the lead in the introduction of a new order of things." (The Prince)
- „War is just when it is necessary; arms are permissible when there is no hope except in arms.“ (The Prince)



3.5.1469 - 22.6.1527
Florence (I)

Siddhattha Gautama Buddha, the Enlightened One

The Eightfold Path



Born under the full moon of
May, 623 B.C.

Jan Evangelista Purkyně Johannes Evangelista Purkinje

- Member of the religious order of the Piarists in Nikolsburg, South-Moravia.
- Founder of the modern neurophysiology.
- Genial neuro-anatomist and neuro-histologist.
- Philosophically high educated, translates Schiller into the Czech language.
- Goethe dedicated him the following poem:

*In your own eye see with joy what
Plato knew from the very beginning!
And if you do not manage this
on your own, Purkinje will
bring it to you.*



17.12.1787, Libochowitz –
28.7.1869, Prague

Theodor Meynert

- University professor for psychiatry, Vienna, 1870, Member of the "Oberster Sanitätsrat".
- Basic research concerning construction and function of the human brain.
- Topology of the cerebral cortex.
- Founder of the modern neuropathology.
- Lectures about pathological anatomy of the human brain as fundamentals in psychiatry and mental disorder.



15.6.1833, Dresden (D) -
31.5.1892, Klosterneuburg (A)

Julius Wagner von Jauregg

- Nobel prize laureate (1927) in psychiatry (the only one) for a neurological project „Vaccinated malaria in treatment of the cerebral syphilis“.
- Basic education in neuro-pathology and internal medicine.
- Scientific research in different chapters in neurology and psychiatry.
- Established a modern psychiatric clinic.
- As a result of the political environment ideological resonance towards the political system. Because his Jewish wife refused divorce, no "party" membership.



7.3.1857, Wels (A) – 27.9.1940, Vienna (A)

Sigmund Freud

- Neurologist, depth psychologist.
- Trainee of Theodor Meynert.
- First research project: Cocain (self-experiment).
- Postdoctoral lecture qualification (Habilitation) in neuro-pathology.
- Contact with J.-M. Charcot.
- Created the basics of psychotherapy, "speech therapy".
- Scientific research of philosophical and religious chapters.



6.5.1856, Freiberg (Moravia) – 23.9.1939, London (UK)

Hans Hoff

- Chairman of the Department of Psychiatry and Neurology, University of Vienna
- Last senior physician of Wagner von Jauregg.
- Numerous publications in neurology and psychiatry
- Co-founder of the topical based neurology, opposite to the phenomenological neurology (Anglo-American), ICD-10-neurology.
- Humanization of the psychiatry, "open psychiatry".
- Internationalization of the Austrian neurology.
- Co-founder of the Central and East-European Association for Neurology (Danube-Neurology).



11.12.1897 - 23.8.1969, Vienna (A)

Hippocratic Oath

I swear by Apollo Physician and Asclepius and Hygieia and Panacea and all the gods and goddesses, making them my witnesses, that I will fulfill according to my ability and judgment this oath and this covenant :

„To hold him who has taught me this art as equal to my parents and to live my life in partnership with him, and if he is in need of money to give him a share of mine, and to regard his offspring as equal to my brothers in male lineage and to teach them this art - if they desire to learn it - without fee and covenant;...

... I will apply dietetic measures for the benefit of the sick according to my ability and judgment; I will keep them from harm and injustice. I will neither give a deadly drug to anybody who asked for it, nor will I make a suggestion to this effect. Similarly I will not give to a woman an abortive remedy. ...

What I may see or hear in the course of the treatment or even outside of the treatment in regard to the life of men, which on no account one must spread abroad, I will keep to myself, holding such things shameful to be spoken about.

Hippocratic Oath

Commitments for the modern physician

- The curative demand is the obligation of the physician, recommendations have to be given to the benefit of the patient, according to the best knowledge and possibilities, damages and unjustness of the patient have to be avoid.
- Beside the curative element the physician has to minimize harm.
- It is the prohibition for the physician to apply poison as well as to give recommendation in such a direction.
- A prolongation of suffering of dying has to be failed.
- The decision about end of life is not under the responsibility of the physician.
- The basic obligation of the physician is to preserve life.

World Medical Association, Helsinki Declaration, 1964 Medical Research Involving Human Subjects Ethical Principles

- Medical progress is based on research which ultimately must rest in part on experimentation involving human subjects
- In medical research on human subject, considerations related to the well-being of the human subject should take precedence over the interest of science and society
- International Code of Medical Ethics: A physician shall act only in patient interest when providing medical care which might have the effect of weakening the physical and mental condition of the patient
- Ethical Principles to provide guidance for physicians and other participants in medical research involving human subjects including identifiable material or identifiable data

Murphy's Law (excerpt) 1

- Anything that can go wrong, will go wrong.
- You will always find something in the last place you look..
- No matter how long or how hard you shop for an item, after you've bought it, it will be on sale somewhere cheaper.
- Anything you try to fix will take longer and cost you more than you thought.
- When a broken appliance is demonstrated for the repairman, it will work perfectly.
- Everyone has a scheme for getting rich that will not work.

Murphy's Law (excerpt) 2

- There's never time to do it right, but there's always time to do it over.
- When in doubt, mumble. When in trouble, delegate.
- Murphy's golden rule: whoever has the gold makes the rules.
- In case of doubt, make it sound convincing. .
- Friends come and go, but enemies accumulate.
- Beauty is only skin deep, ugly goes to the bone.
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Tips

for a successful scientific career in neurology 1

1. Profound knowledge in neuro-anatomy and neuro-pathology.
2. Good knowledge in neuro-physiology.
3. Acquiring of profound knowledge in clinical neurology based on topical trained neurology, mistrust to phenomenological neurology.
4. Mistrust against Evidence Based Medicine as well as different libraries.
5. Early start with own research programs.
6. At an early stage co-working in scientific projects (preferably already pre-clinical) – working "rank and file" enhances career and teamwork (and helps the head).

Tips

for a successful scientific career in neurology 2

7. Early decision to autonomous scientific thinking. Adoption to work under guidance, accepting control.
8. Early identification to a role model of the clinical teacher.
9. Avoidance of emotional-guided protest.
10. Early orientation towards international co-working, contacts and network.
11. Profound knowledge of ethical principles and their practical application in daily practice and in research.
12. Human proper behavior in patient-doctor-relationship, avoidance of elitist behavior.

Role model for a successful clinical assistant





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