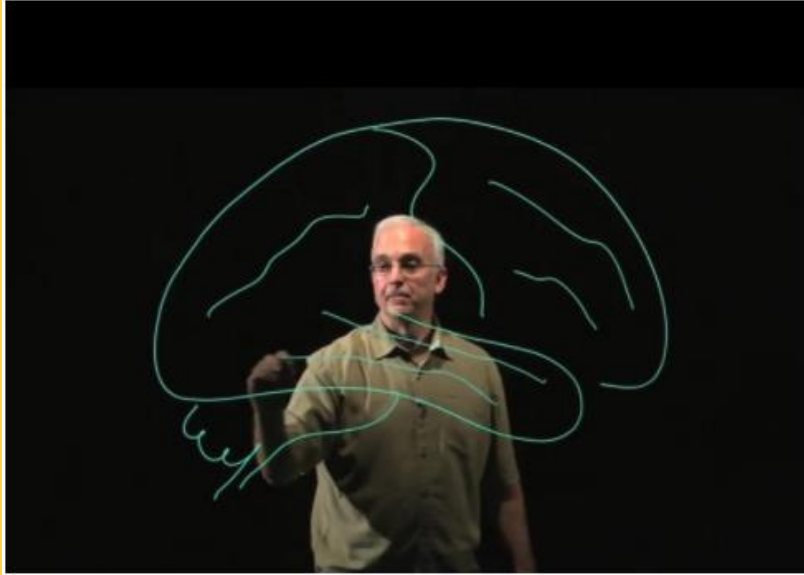


Learn Medical Neuroscience

<https://www.learnmedicalneuroscience.nl/>

Supporting Students Learning in Medical Neuroscience



"Visualize your knowledge" - prof. Len White, Tutorial Video *Your Part!* at 07:15

- Free website for students of free MOOC, "Medical Neuroscience", used in Blended Learning
- Course is challenging to some (fundamental biology, learning skills, English, full life)
- Website is designed to support these learners with relevant content and learning strategies

Parts of the website

- Learning Community
- Virtual Lab
- Learning Materials
- Neurological Exam
- Study Strategy and Study Tips



Lay out of the Website

Learn Medical Neuroscience

Resources to support your Learning in Medical Neuroscience

Home **Learning Community** Virtual Lab ▾ Learning Materials ▾ Neurological Exam Contact ▾ News

Learning Community



Learning Neuroscience, has side-effects...

Learning Community Medical Neuroscience by Kevin Reginald Park

Congratulations if you signed up for the course. You are in for a treat. When you are about halfway through, just the mention of the words “Neuroscience Core Concept” will trigger a spark of joy, and by the time you’ve finished you will be amazed at what you have learned. You might feel a bit itchy and think you have to do the course again to really master the content. That’s O.K.; there are a lot of people that came back several times.

The Learning Community, benefit by active participation

NEWS

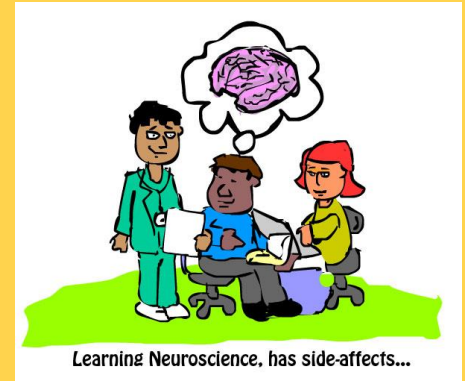
- [New Mentor for Medical Neuroscience](#)
- [Website for distance learning in Neuroscience](#)
- [Covid 19 : Free access to Sylvius.](#)
- [Visiting the annual meeting of the Society for Neuroscience 2019](#)
- [Prof. Len White receives two awards from Duke University](#)
- [Medical Neuroscience in the 2018 edition of Class Central's Top 50 MOOCs of All Time](#)
- [Review Medical Neuroscience](#)
- [Duke University Course Credit for online Course Medical Neuroscience](#)
- [Prof. White's thoughts on the Sixth Edition of Neuroscience](#)
- [Prof. White wins Duke University teaching award again](#)

Study Strategy

- [General Study Tips](#)
- [Study Tips Neuroanatomy](#)
- [Study Tips Neural Signaling](#)
- [Study Tips Sensory Systems](#)
- [Study Tips Motor Systems](#)
- [Study Tips for the Functional Anatomy Exam](#)
- [Study Tips Brain Development](#)
- [Study Tips Cognition](#)
- [Study Tips for the Final Exam](#)
- [Medical Neuroscience Bulletin Board](#)

- Designed to give overview
- Top menu: access to resources supporting community and content
- Sidebar: Study Tips to support learning process

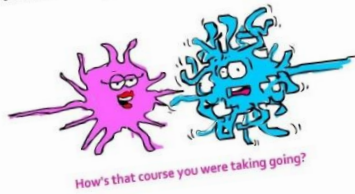
Learning Community



Learning Community

Webpage encouraging learners to learn socially

- Use of the course Discussion forum
- Strengthening the Learning Community



- Medical Neuroscience Facebook page.
- #GetNeuro challenges

Figure: by Kevin Reginald Parks
(member of the Medical Neuroscience Learning Community)

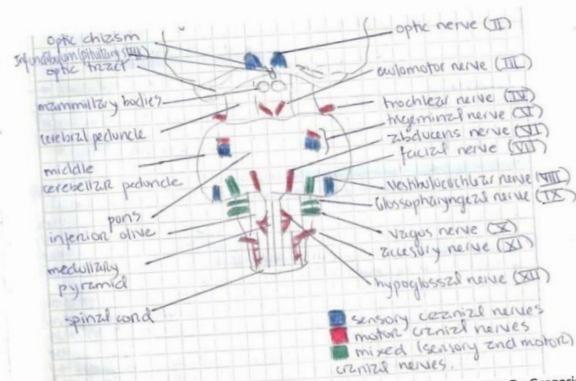
Country	Users
1. United States	44,557
2. India	10,777
3. China	7,567
4. United Kingdom	6,999
5. Russia	5,895
6. Brazil	5,644
7. Canada	4,779
8. Mexico	4,493
9. Australia	3,812
10. Colombia	3,760

Location of users website

Virtual Lab

Virtual Lab

Unit A: Neuroanatomy



Drawing from the Notebook of Medical Neuroscience mentor Giulia Petitto De Gregorio

Links (to visual resources) are given in each paragraph (see list below).

- General resources Neuroanatomy
- Functional Microanatomy of Neurons
- Basic Orientation in the Human CNS
- Lateral Surface of the Cerebral Hemispheres
- Medial Surface of the Cerebral Hemispheres
- Ventral Surface of the Cerebral Hemispheres
- Overview of Cerebral Anatomy
- Cranial and Spinal Nerves
- Anatomy of the Brainstem
- Midbrain
- Pons
- Medulla Oblongata
- Cranial Nerve Nuclei
- Internal Anatomy of the Spinal Cord
- Blood Supply to the Brain
- Ventricles
- Internal Capsule and Deep Gray Matter

- A curated set of links to relevant free websites. Organized to map course content in 8 subpages:
- General Resources
- Unit A: Neuroanatomy
- Unit 1: Neural Signaling
- Unit 2: Sensory Systems
- Unit 3: Motor Systems
- Unit 4: Brain Development
- Unit 5: Cognition
- Additional Neuroscience Sites

Learning Materials

Learning Materials

- Especially created for the course:
 - Summary of Pathways
 - Roadmap for effective learning
 - Brain Section images for visualizing pathways
- Links to sites reviewing Medical Neuroscience knowledge

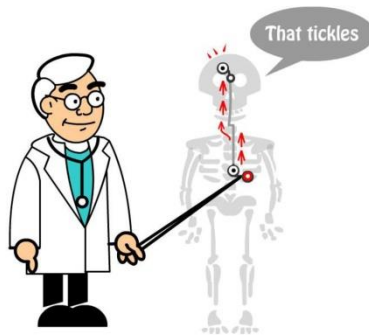
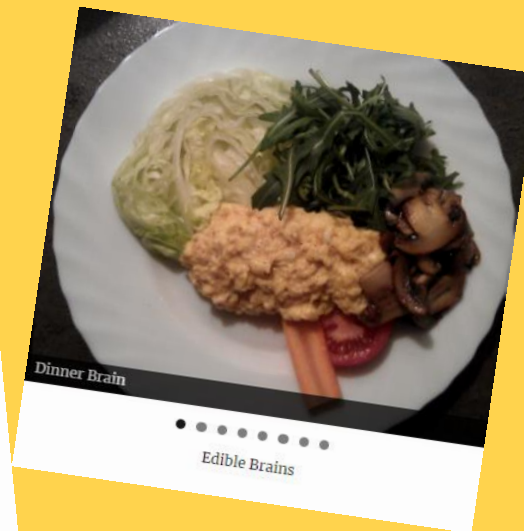


Figure: by Kevin Reginald Parks
(member of the Medical Neuroscience Learning Community)

Subpages

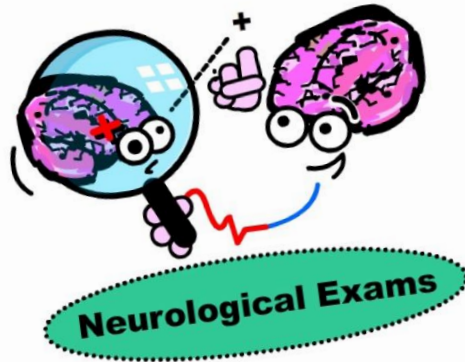
- Visualize your knowledge
- How to find relevant scientific literature



Examples of student-created photos from the page "Visualize your knowledge"

Neurological Exam and examples of resources

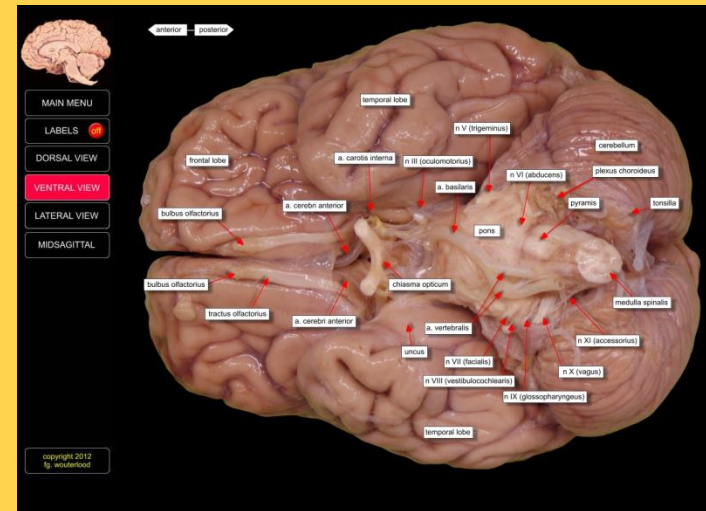
Neurological Exam



- Neurological exam
- NeuroLogical cases
- Stroke Model
- Clinical Neurology Videos

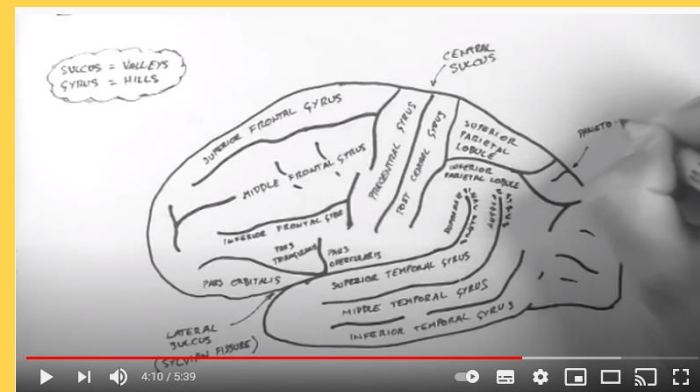
Figure: by Kevin Reginald Parks
(member of the Medical Neuroscience Learning Community)

Visual



[The Human Brain](http://www.anatomie-amsterdam.nl) by www. anatomie-amsterdam.nl

Short knowledge clips



Brain Anatomy 1 - Gross Cortical Anatomy (Lateral Surface)

305.255 weergaven • 12 feb. 2012

2,7K 50 DELEN OPSLAAN

Handwritten Tutorials
304K abonnees

GEABONNEERD

Study Strategy

Roadmap to successful study
 A general roadmap to successful study has been developed by course mentors and staff. [Roadmap for effective learning](#). This Roadmap presents a clear overview of things to do and things to avoid, the table at the end with Do <-> Do not. .

✓ Do	✗ Do not
• Chunk the problem	Underline so much that chunks are not clear
• Focus on working on the separate chunks.	Try to learn all the material at once
• Learn from mistakes	Avoid making mistakes by merely glancing at solutions and not find answers yourself.
• Alternate different problem-solving or learning techniques during your practice	Kid yourself by spending a lot of time just passively reading and rereading
• Let your mind ramble over the material that has to be mastered	Only focus very hard without allowing your mind to play with concepts, problems and solutions
• Use recall and test yourself every step of the way	Trust you know the material without actually testing your knowledge
• Take breaks after 25 minutes learning	Try to be a tough learner by studying long periods without rest
• Space your repetition over several days	Only learn immediately before a test with the sole purpose of passing the test
• Learn by teaching the learned material, design tests for (imaginary) peers, prepare a presentation of the material learned	Fail to give attention to testing the whole material
• Make sure you get enough sleep.	Prioritize last minute cramming of material over a good night's sleep

Focus on course material

- Use the materials of the website www.learnmedicalneuroscience.nl in your learning.
- It works best if you really focus on the course materials.
- It is a good idea to scan the tutorial notes before watching the Video Tutorials .

Take notes

Notebook Medical Neuroscience
 by Giulia Petitto De Gregorio



Use Quizzes to learn the course material

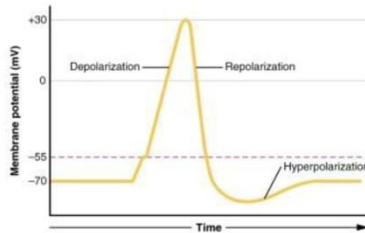
- When you prepare for a Unit Quiz it is best if you study the Tutorial Notes again. You can use them when doing the Unit Quiz.
- The quizzes are wonderful learning material

Study Tips



- Study Strategy
 - General Study Tips
 - Study Tips Neuroanatomy
 - Study Tips Neural Signaling
 - Study Tips Sensory Systems
 - Study Tips Motor Systems
 - Study Tips for the Functional Anatomy Exam
 - Study Tips Brain Development
 - Study Tips Cognition
 - Study Tips for the Final Exam
- Medical Neuroscience Bulletin Board

Study Tips Neural Signaling



Action Potential (source Anatomy & Physiology OpenStax College; Download for free at <http://cnx.org/content/col11496/latest/>)

Concrete additions to your study strategy to make your study more successful and more fun with optimal use of the resources.

Study Tip Neural Signaling 1.

Use the resources in the [Virtual Lab, Unit 1: Neural Signaling](#).

Study Tip Neural Signaling 2.

If you do not feel confident on your biological background, you can try if this book can be of help: [Biology](#) – OpenStax college. Chapter 35: The Nervous System and Chapter 36: Sensory Systems

Study Tip Neural Signaling 3.

If you are watching a tutorial and think 'hearing your explanation that makes sense' but you are not sure you will recall the explanation when you get questions about it, write down the time and tutorial of the explanation in your notes. Then it's easier to re-view the explanation to really get it.

Study Tip Neural Signaling 4.

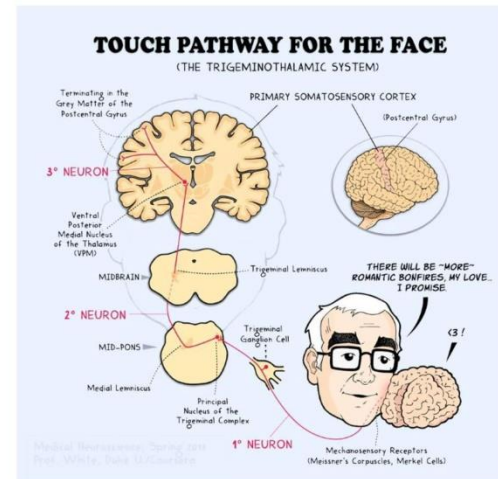
For those of you that do not have the textbook, you can use the [digital edition of the textbook \(second edition\)](#). For example:

1. An important figure is figure 5.3 Sequence of events involved in transmission at a typical chemical synapse. It is figure 5.3 in the second edition as well.
2. An important figure is a figure on excitatory and inhibitory post synaptic potentials (figure 5.21 in the tutorial). It can be found in the second edition as well. There the number of the figure is 7.6.
3. the figure on NMDA receptors (fig.8.10 in the tutorial) can be found as figure 25.9 in the digital edition of Neuroscience.

In this digital edition you can also read the text. Of course in that case use table of contents to find the text.

Study Tip Neural Signaling 5.

Study Tips Sensory Systems



Brain Cares. Image from the Peer Assessment of the Medical Neuroscience course in 2013

Study Tips Sensory Systems 1.

Now you are starting with the intense core of Medical Neuroscience, Units 3 and 4. First of all it is a good idea to start a thread in the forum to form a study group and share your experiences. You can be in touch with fellow students that can help when the going gets tough. In addition to forum study groups you can also join the Medical Neuroscience [Facebook group](#). That page was started in 2013 when Medical Neuroscience ran for the first time. It is open to this class as well. That 1st year people were sharing their drawing efforts for the assessments. It was inspiring and great fun, there were real artists among us (see photos on Facebook page).

Study Tips Sensory Systems 2.

You can use the resources on the page [Virtual Lab, Unit 2: Sensory Systems](#).

Study Tips Sensory Systems 3.

Drawing pathways is a powerful learning tool (see Week 5, Somatic sensation, [Tutorial Mechanosensory pathways](#), part 3; 09:50-14:25 for Dr. White's directions for learning pathways). You can draw pathways and share your drawings in the learning community on the forum. It is very good to assess the attempts of your peers and give feedback on their images. As a result you both learn. 😊:

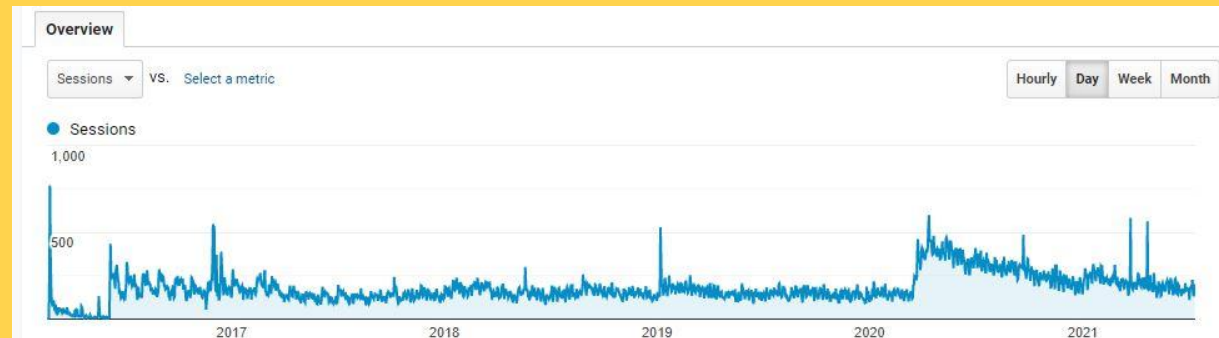
Use of the website

The website is used enthusiastically by learners continuously. +/-170 sessions a day. Most used are the pages Virtual lab Neuroanatomy, the Learning Materials and Study Tips.

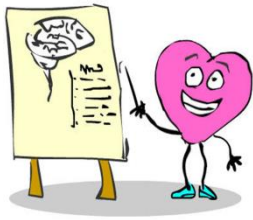
www.learnmedicalneuroscience.nl has supported student learning in the MOOC, “Medical Neuroscience”, and has become a valued resource for a global community of learners and users seeking a curated set of resources for learning human and medical neuroscience.

<input type="checkbox"/>	Page ?	Pageviews ? ↓
		714,789 % of Total: 100.00% (714,789)
<input type="checkbox"/>	1. /	198,165 (27.72%)
<input type="checkbox"/>	2. /virtual-lab/neuroanatomy/	93,372 (13.06%)
<input type="checkbox"/>	3. /learning-materials-medical-neuroscience/	45,173 (6.32%)
<input type="checkbox"/>	4. /study-tips-neuroanatomy/	43,370 (6.07%)
<input type="checkbox"/>	5. /virtual-lab/general-resources/	39,763 (5.56%)
<input type="checkbox"/>	6. /learning-materials-medical-neuroscience/visualize-your-knowledge/	34,682 (4.85%)
<input type="checkbox"/>	7. /virtual-lab/	32,207 (4.51%)
<input type="checkbox"/>	8. /learning-community/	31,531 (4.41%)
<input type="checkbox"/>	9. /bulletin-board/	24,358 (3.41%)
<input type="checkbox"/>	10. /neurological-exam/	20,729 (2.90%)

Popular pages:, (/ = homepage)



COVID-19 pandemic



Affective Learning Medical Neuroscience
by Kevin Reginald Parks

www.learnmedicalneuroscience.nl

Public website for anyone. Designed specifically to support learners in of the MOOC (massive open online course) "Medical Neuroscience" (Coursera and Duke University)

Website created and maintained by Ellen Vos-Wisse, mentor in Medical Neuroscience and a long-standing member of the global learning community.

The website features cartoons created by Kevin Reginald Parks, another mentor in Medical Neuroscience. These cartoons motivate empathy, encouragement and the joy of learning Medical Neuroscience.

Learning Community
Medical Neuroscience has drawn a global learning community with people from all walks of life and all educational backgrounds. For most, this is their first structured learning in Neuroscience. This website was created with these "entry-level" learners in mind. It features to-the-point resources and study tips strategically designed to help them learn course content and to better understand their own learning process.

The Learning Community page is designed to promote engagement and social learning.

Virtual Lab
A curated set of links to relevant free websites. Organized to map course content in 8 subpages:

- General Resources
- Unit A: Neuroanatomy
- Unit 1: Neural Signaling
- Unit 2: Sensory Systems
- Unit 3: Motor Systems
- Unit 4: Brain Development
- Unit 5: Cognition
- Additional Neuroscience Sites

Learning Materials
Materials to revise knowledge. Content created strategically to support learning key concepts in Medical Neuroscience. Subpages with learner-created visualizations and efficient guidance for identifying and searching peer-reviewed scientific literature.

Neurological Exam
Links to sites and videos on the neurological exam.

Study Tips
Several pages supporting the learning process with diverse sets of strategies and tips.

Learning Community
Webpage encouraging learners to learn socially

- Use of the course Discussion forum
- Strengthening the Learning Community

• Medical Neuroscience Facebook page.
• #GetNeuro challenges

Kevin Reginald Parks
Member of the Medical Neuroscience Learning Community

Learn Medical Neuroscience

Learning Community

The Learning Community, benefit by active participation

Screenshot website

Virtual Lab
Unit A: Neuroanatomy

Links (to visual resources) are given in each paragraph (see list below).

- General resources Neuroanatomy
- Functional Microanatomy of Neurons
- Basic Orientation in the Human CNS
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- Ventral Surface of Central Anatomy
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- Anatomy of the Brainstem
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- Internal Anatomy of the Spinal Cord
- Blood Supply to the Brain
- Ventricles
- Internal Capsule and Deep Gray Matter

www.learnmedicalneuroscience.nl

Supporting Students Learning in Medical Neuroscience



Learning Materials

- Especially created for the course:
 - Summary of Pathways
 - Roadmap for effective learning
 - Brain Section images for visualizing pathways
- Links to sites reviewing Medical Neuroscience knowledge

Kevin Reginald Parks
Member of the Medical Neuroscience Learning Community

Neurological Exam

- Neurological exam
- Neurological cases
- Stroke Model
- Clinical Neurology Videos

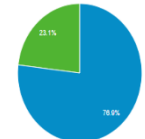
Kevin Reginald Parks
Member of the Medical Neuroscience Learning Community

Study Tips
Study Strategy

- Focus on course material
- Take notes
- Visualize your knowledge. Sketch!
- Use Quizzes to learn

Kevin Reginald Parks
Member of the Medical Neuroscience Learning Community

■ New Visitor ■ Returning Visitor



Number of Users
(2016-02-22 to 2021-07-13):
164,583
source: Google Analytics

Page	Pageviews
	714,789 % of Total: 100.00% (714,789)
1. /	198,165 (27.72%)
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Most popular pages
Source: Google Analytics
(/= homepage)

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6. Brazil	5,544
7. Canada	4,779
8. Mexico	4,493
9. Australia	3,812
10. Colombia	3,760

Location of users, top 10 countries,
source Google Analytics



E. Vos-Wisse ; www.learnmedicalneuroscience.nl, volunteer mentor
K.R. Parks; volunteer mentor
V.V. Malakhov; volunteer mentor
G.N. Petitto De Gregorio; volunteer mentor
L. E. White; course instructor

Cartoons by: Kevin Reginald Parks.
The cartoons were shared with the learning community in the thread "The Lateral Funiculus" in the course Discussion Forum.