

Errata List - 120316

- Page 4, third paragraph.** "...large amounts of 24OHCh may induce *de novo* Ch synthesis by astrocytes..." The term "induce" is incorrect and shall be replaced by "inhibit", consistently with the known role of oxysterols as potent inhibitors of Ch synthesis.
- Page 9, Figure 1 caption.** The description is misleading; α -secretase (and not γ -secretase) cleaves APP β A domain, releasing an 83 amino acid carboxy-terminal fragment (CTF) (C83) into the cytoplasm and secreting the sAPP α N-terminal fragment (NTF) into the extracellular milieu. In contrast, APP cleavage by β -secretase (BACE) releases the sAPP β NTF into the extracellular milieu and leaves a 99 amino acid CTF (C99), containing the amyloidogenic APP domain that is subsequently processed at the plasma membrane by the γ -secretase complex to produce A β peptide units. Besides releasing A β , such γ -secretase processing of C99 leaves the so-called APP intracellular domain fragment (and obviously not the C99 fragment itself) at the plasma membrane that can either be translocated into the nucleus or processed by caspases to produce a 31 amino-acid C-terminal fragment.
- Page 12, end of second paragraph.** Minor correction: "So far, statins have been shown to *enhance* Ch efflux, *upregulate* ABC-A1 and ABC-G1 expression and impair Ch synthesis in macrophages"
- Page 14, second paragraph, line 5.** Minor correction: "...and quantitative determination of the levels and number of ST species in tissue."
- Page 19, first paragraph, end of line 6;** "Each secondary ion..." should be replaced by "Each secondary ion type...", as it refers to secondary ion species produced by desorption of the corresponding compound in the tissue sample, and not to individual secondary ions.
- Page 19, end of third paragraph;** the last two sentences, for consistency, should be rewritten as follows: "...allows for generation of images by selecting and integrating *particular peaks representing specific secondary ions* (i.e cholesterol or sulfatides)".
- Page 20, Figure 1-4.** The image was obtained online from The Courant Research Centre in Geobiology, accessible at <http://www.geobiologie.uni-goettingen.de/people/vthiel/>
- Table 1-1 and first paragraph, line 6.** The lateral resolution units shall be given in μm and not in mm.
- Figure 4-4.** Due to space limitations, C18:1 has not been included in the figure. Nevertheless, after osmium staining, C18:1 and C18:2 fatty acid chains display almost identical surface distribution.
- Page 38, heading.** The study is included in paper III and not in paper IV.
- Page 39, second paragraph, line 2.** In order to maintain consistency, the lateral resolution "<400nm" term shall be replaced by "<500nm".
- Page 40, first paragraph.** The use of the abbreviation "MSI" is, in the given context, misleading, and should be replaced by "ToF-SIMS".
- Page 42, last paragraph, line 6.** In the given reference "Poirier et al. 1993", the authors studied the molecular layer of dentate gyrus. Therefore, to maintain consistency, the term "hippocampus" in line 6 shall be replaced by "dentate gyrus".
- Page 46, third paragraph, line 4.** Minor correction: "...those from other plaques located *in* regions with discrete or no Ch accumulation".
- Page 50, third paragraph, line 3.** Paper IV includes the analysis of 5 3xTg-AD mouse brain sections, and therefore, the line should be rewritten as follows: "...whereas 3xTg-AD *mice were* 18 month old."
- Page 50, third paragraph, line 5.** The term "ST" shall be replaced by "A β ", as the sentence refers to the brain's amyloid-beta load and not to sulfatide load.
- Page 52, conclusion II, line 4.** The term "collision induced dissociation" is not written properly; it shall be rewritten as "Collision-Induced Dissociation".
- Paper III, page 16, last paragraph, last line.** The term "B6SJFL1" is misleading, and shall be replaced by "wild-type control". The experimental section already describes the genetic background of all wild-type mice used as control specimens.

- Paper III, page 17, first paragraph, last line.** Consistently with the correction described above, the term C57BL/6 is misleading and shall be replaced by “wild-type control”.
- Paper III, page 27 figure 6 caption, line 12.** The middle part of the sentence should include the term “CA-2” and shall be rewritten as follows: “...The cerebellar granular cell layer *as well as the hippocampal CA-2 subfield display* increased CN/CNO ion signal”.
- Paper IV, page 2, second paragraph, line 11.** The terms “Tg2576” and “APPV717F” are incorrect. The mouse model studied in Cheng et al., (2010) is the APP^{swe}. Therefore, the line should be rewritten as follows: “...regions of APP^{swe} mouse model of AD...”
- Paper IV, page 2, second paragraph, line 12.** Minor correction: “...mirroring a process likely *to be* mediated by apoE...”
- Paper IV, page 2, third paragraph, last line.** Minor correction: the words “for displayed” at the end of the sentence shall be removed, and the sentence shall be rewritten as follows: “...based, though, on a limited number of regions analyzed”.
- Paper IV, page 2, fourth paragraph, first line.** Minor correction: the term “fluorescent” shall be replaced by “fluorescence”.
- Paper IV, page 3, first paragraph, lines 8-9.** The term “in structure” at the beginning of line 9 is redundant and shall be removed. The sentence shall be rewritten as follows: “...did not reveal any p-FTAA-related structural differences between deposits in regions with...”
- Paper IV, page 8, second paragraph, line 3.** Figure assignment is incorrect; the sentence shall be rewritten as follows: “Figures 1e, 1j and 1o present the Ch profile of the regions, whereas Figs. 1d, 1i and 1n display the p-FTAA...”
- Paper IV, page 8, second paragraph, line 9.** Minor correction: “...with sizes similar to the focal deposits shown in Figs. 1d-e”.
- Paper IV, page 11, first paragraph, line 6.** Minor correction: letter “f” after “cortex” shall be removed.
- Paper IV, page 11, first paragraph, last line.** Minor correction: “CA2-CA” shall be replaced by “CA2-CA3”.
- Paper IV, page 11, third paragraph, line 12.** Minor correction: the article “the” after “...display ST and Ch for a” shall be removed.
- Paper IV, page 12, last paragraph, line 8.** For clarity reasons, the sentence shall be rewritten as follows: “...a core structure that emits fluorescence with *comparatively higher* red component intensity”.
- Paper IV, page 13, second paragraph, lines 4-5.** The average plaque areas were calculated by averaging the area of 58 and 30 plaques measured for 3xTg-AD and Tg2576 brain sections respectively, previously mentioned in page 13 paragraph 1.
- Paper IV page 15, last paragraph lines 3-4.** Minor correction: “...”and in areas *with* increased sterol granulation...”
- Paper IV page 16, second paragraph line 7.** Minor correction: the “\” bar after “S1 barrel cortex” shall be removed.
- Paper IV, page 17, first paragraph, last line.** Minor correction: “...Iba-1 positive cells were quantified within the entire *squared* regions”.
- Paper IV, page 27, figure 2 caption, line 6.** The term “hippocampal” in “Note that different hippocampal structures were analyzed” shall be removed, as other regions besides hippocampus were scanned.
- Paper IV, page 31, figure 6 caption, line 2.** The correct name for the abbreviation “GFAP” is “Glial Fibrillary Acidic Protein”
- Paper IV, page 31, figure 6 caption, line 5.** Figure letter mismatch; the line shall be rewritten as follows: “(c,d): CLSM images displaying the (c) GFAP (green) and (d) Iba1 (red) immunostainings together...”
- Paper IV, page 32, figure 7 caption, line 14.** Minor correction: the word “analyzed” shall be replaced by “quantified”.