

## LasseurLiterature list about the MELiSSA Project and connected research (1988-2022) followed by seminal proceedings of 1987-1988

**Legend of paper (or book chapters) topics/MELiSSA compartments:**

**LSS :** Life Support Systems

**SP:** Space flight experiments and related studies (biocontamination, confined or extreme environments, space simulations (radiation, microgravity, low shear))

**Mo:** modelling

**C1:** MELiSSA first compartment (thermophilic, anaerobic, waste degradation)

**C2:** MELiSSA second compartment (anaerobic, photosynthetic)

**C3:** MELiSSA third compartment (nitrifying)

**C4a :** MELiSSA fourth compartment (microbial food production (spirulines (*Limnospira indica* ex:*Arthrospira*)))

**C4b:** MELiSSA fourth compartment (plant food production)

**C5:** Consumers compartment

**MPP:** MELiSSA Pilot Plant.

Year	Authors	Topic/MELiSSA Compartment	Title	Journal	Volume	Pages/DOI/ PMID..
2022	Nguyen Tinh Van, Viver T, Mortier J, Bin Liu, Smets I, Bernaerts K, Faust K, Lavigne R, Poughon L, Dussap C-G, Springael D	C1	Isolation and characterization of a thermophilic chain elongating bacterium that produces the high commodity chemical n-caproate from polymeric carbohydrates	Bioresource Technology	October 2022	DOI: 10.1016/j.biortech.2022.128170

<b>2022</b>	Faust V, van Alen T.A, Op den Camp H.J.M., Vlaeminck S.E., Guanigué R., Boon N., Udert K.M.	C3	Ammonia oxidation by novel “Candidatus <i>Nitrosacidococcus urinae</i> ” is sensitive to process disturbances at low pH and to iron limitation at neutral pH	Water Research X October 2022, 100157	17,1	DOI.org/10.1016/j.wroa.2022.100157
<b>2022</b>	Ciurans C, Guerrero J M, Martínez-Mongue I., Dussap C-G, Marin de Mas I , Godia, F	C4b, Mo	Enhancing control systems of higher plant culture chambers via multilevel structural mechanistic modelling	Front. Plant Sci. 13:970410.		DOI.org/10.3389/fpls.2022.970410
<b>2022</b>	Kumar D, Tiwari A., Fontaine J-P	SP	Evaluation of water vapor condensation using the thermoelectric cooling technique by experimental and theoretical observations	Phys. Fluids 34, 102108	34, 102108	DOI.org/10.1063/5.0106434
<b>2022</b>	Segers C, Mysara M, Coolkens A, Baatout S, Leys N, Lebeer S, Verslegers M, Mastroleo F	C4a, C5	<i>Limnospira indica</i> PCC8005 or <i>Lacticaseibacillus rhamnosus</i> GG dietary supplementation modulate the gut microbiome in mice	Appl. Microbiol. Vol2		3, 636-650
<b>2022</b>	Verbeelen T., Van Houdt R., Leys N., Guanigué R., Mastroleo F.	SP	Optimization of RNA extraction for bacterial whole transcriptome studies of low-biomass samples.	iScience		DOI.org/10.1016/j.isci.2022.105311
<b>2022</b>	Faust V., Gruber W., Ganigué R., Vlaeminck S.E., Udert K.M	C3	Nitrous Oxide Emissions and Carbon Footprint of Decentralized Urine Fertilizer Production by Nitrification and Distillation	ACS ES&T Engineering 2(9) 1745-55	2(9) 1745-55	DOI: 10.1021/acse.stengg.2c00082
<b>2022</b>	Audas C., Ortega Ugalde S, Paille C, Lamaze B, Lasseur C.	LSS	Life Support Systems beyond Low Earth Orbit advocates for an improved resources management approach	EEEP Journal 1, 5-13	1, 5-13	DOI.org/10.32006/eeep.2022.1.0513

<b>2022</b>	Cabecas Segura P, Onderwater R, Deutschbauer A, Dewasme L, Wattiez R, Leroy B.	C2	Study of the Production of Poly(Hydroxybutyrate- co-Hydroxyhexanoate) and Poly(Hydroxybutyrate-co-Hydroxyvalerate-co- Hydroxyhexanoate) in <i>Rhodospirillum rubrum</i>	Appl Environ Microbiol. Mar 22	88(6): e01586 21	DOI:10.1128/ AEM.01586- 21.PMID: 35080906; PMCID: PMC8939316 .
<b>2022</b>	Garcia-Gragera, D., Peiro, E., Arnau, C., Cornet, J. F., Dussap, C. G., & Godia, F.	MPP,C4a	Dynamics of long-term continuous culture of <i>Limnospira indica</i> in an air-lift photobioreactor	Microbial biotechnology	15(3) : 931– 948	DOI.org/10.1 111/1751- 7915.13882
<b>2022</b>	Mastroleo F., Arnau C., Jimenez C., Verbeelen T., Mysara M., Godia F., Leys N., & Van Houdt R..	C3	Metaproteomics, heterotrophic growth and distribution of <i>Nitrosomonas europaea</i> and <i>Nitrobacter winogradskyi</i> after long-term operation of an autotrophic nitrifying biofilm reactor	Appl. Microbiol.	2(1) 272- 287	DOI.org/10.3 390/applmicr obiol2010020
<b>2022</b>	Aronne G, Muthert LWF, Izzo LG, Romano LE, Iovane M, Capozzi F, Manzano A, Ciska M, Herranz R, Medina FJ, Kiss JZ, van Loon JJWA.	LSS ,C4b,SP	A novel device to study altered gravity and light interactions in seedling tropisms	Life Sciences in Space Research	32 : 8-16	DOI.org/10.1 016/j.lssr.202 1.09.005
<b>2022</b>	Izzo L.G., Romano L.E., Muthert L.W.F., Iovane M., Capozzi F., Manzano A., Ciska M., Herranz R., Medina F.J., Kiss J.Z.,	C4b	Interaction of gravitropism and phototropism in roots of <i>Brassica oleracea</i>	Environmental and Experimental Botany		DOI.org/10.1 016/j.envexp bot.2021.104 700

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<b>2021</b>	El-Nakhel, C.; Geelen, D.; De Paepe J.; Clauwaert, P.; De Pascale, S.; Roushanel, Y.	C4b	An Appraisal of Urine Derivatives Integrated in the Nitrogen and Phosphorus Inputs of a Lettuce Soilless Cultivation System.	Sustainability	13, 421 8.	DOI.org/10.3390/su13084218
<b>2021</b>	Guarato P.	LSS, Mo	Carbon Capture, Utilization and Storage in Switzerland Volume 1. The Technological and Scientific framework	Cahier de l'IDHEAP (Institut des hautes études en administration Publique/Unil. Lausanne)	315 2021 104pp	ISBN 978 2 940667 05 5
<b>2021</b>	Guarato P.	LSS, Mo	Carbon Capture, Utilization and Storage in Switzerland Volume 2. The Institutional and Legal framework	Cahier de l'IDHEAP	316 2021 205pp	ISBN 978 2 940667 06 2
<b>2021</b>	Ciurans C, Bazmohammadi N, Poughon L, Vazquez J.C, Dussap C-G, Godia F, Guerrero J.M	MPP, Mo, LSS	Hierarchically Controlled Ecological Life Support Systems	Comp. Chem. Engineering	157, 107625 2021 Dec 5	DOI.org/10.1016/j.compcchemeng.2021.107625
<b>2021</b>	Verbeelen T, Leys N, Guanigue R, Mastroleo F	C3,C2, LSS, SP	Development of Nitrogen Recycling Strategies for Bioregenerative Life Support Systems in Space	Front. Microbiol.	2021 Oct 13	DOI.org/10.3389/fmicb.2021.700810
<b>2021</b>	Garcia-Gragera D, Arnau C, Peiro E, Godia F, Dussap C-G, Poughon L, Gerbi O, Lamaze B , Lasseur C.	MPP, LSS	MELiSSA Pilot Plant Integration: building blocks for a regenerative life support platform	Front. Astronomy and Space Sciences, section Astrobiology	2021 Oct 19	DOI.org/10.3389/fspas.2021.750616

<b>2021</b>	Cabecas Segura P, De Meur Q, Tanghe A, Onderwater R, Dewasme L, Wattiez R, Leroy B.	C2	Effects of Mixing Volatile Fatty Acids as Carbon Sources on <i>Rhodospirillum rubrum</i> Carbon Metabolism and Redox Balance Mechanisms	Microorganisms	2021 Sept 21	DOI: 10.3390/microorganisms9091996. PMID: 34576891; PMCID: PMC8471276
<b>2021</b>	Bayon-Vicente G, Marchand E, Ducrotois J, Dufrasne FE, Hallez R, Wattiez R, Leroy B.	C2	Analysis of the Involvement of the Isoleucine Biosynthesis Pathway in Photoheterotrophic Metabolism of <i>Rhodospirillum rubrum</i>	Front Microbiol.	2021 Sept 21	DOI: 10.3389/fmicb.2021.731976. PMID: 34621257; PMCID: PMC8490811
<b>2021</b>	Paradiso R, De Pascale S	C4b	Bioregenerative systems to sustain human life in Space: the research on higher plants	Ital Hortus	2021 Sept	DOI: 10.26353/j.italhort/2021.2.0121
<b>2021</b>	Garcia-Gragera D, Peiro E, Arnau C, Cornet J-F, Dussap C-G, Godia F	C4a	Dynamics of long-term continuous culture of <i>Limnospira indica</i> in an air-lift photobioreactor	Microb Biotechnol	2021 Aug 2.	PMID: 34342154 DOI: 10.1111/1751-7915.13882
<b>2021</b>	Yadav A, Maertens L, Meese T, Van Nieuwerburgh F, Mysara M, Leys N ,	C4a, SP	Genetic Responses of Metabolically Active <i>Limnospira indica</i> Strain PCC 8005 Exposed to $\gamma$ -Radiation during Its Lifecycle	Microorganisms	2021 Jul 30 9(8):16-26.	PMID: 34442705 PMCID: PMC8400943 DOI:10.3390/microorganisms

Cuypers A, Janssen P-J						9081626
<b>2021</b>	Fahrion J, Mastroleo F, Dussap CG, Leys N.	C4a, LSS	Use of photobioreactors in Regenerative Life Support Systems for Human Space Exploration	Front. Microbiol. June 29	12: 69952 5	DOI: 10.3389 PMID: 34276632
<b>2021</b>	Sachdeva N, Poughon L, Gerbi O, Dussap C-G, Lasseur C, Leroy B, Wattiez R.	C4a, LSS	Ground Demonstration of the Use of <i>Limnospira indica</i> for Air Revitalization in a Bioregenerative Life-Support System Setup: Effect of Non-Nitrified Urine-Derived Nitrogen Sources	Frontiers in Astronomy and Space Sciences	2021 June 8	DOI:10.3389/fspas.2021.700270
<b>2021</b>	Lasseur C, Mergeay M.	LSS	Closed ecological systems in extreme environments , current and future ways to closed life support systems : Virtual MELISSA conference , Ghent (B) (3-5 /11/2020). A review	Ecological Engineering and Environment Protection,	No 1, p. 25-35	DOI.org/10.32006/eeep.2021.1.2535
<b>2021</b>	Van Gerrewey T, El-Nakhel C, De Pascale S, De Paepe J, Clauwaert, P, Kerckhof F-M, Boon N, Geelen D.	C4b	Root-Associated Bacterial Community Shifts in Hydroponic Lettuce Cultured with Urine-Derived Fertilizer	Microorganismsmdpi,1255426	9	DOI:10.3390/microorganisms9061326
<b>2021</b>	De Pascale S, Arena C, Aronne G, De Micco V, Pannico A, Paradiso R, Roushanel Y.	C4b, LSS, SP	Biology and crop production in Space environments: Challenges and opportunities.	Life Sci Space Res (Amst).	29: 30-37	DOI: 10.1016/j.lssr.2021.02.005. Epub 2021 Mar 2.

					PMID:
					33888285 Review.
<b>2021</b>	Cockell CS, Santomartino R, Finster K, Waajan AC, Nicholson N, Loudon CM, Eades LJ, Moeller R, Rettberg P, Fuchs FM, Van Houdt R, Leys N, Coninx I, Hatton J, Parmitano L, Krause J, Koehler A, Caplin N, Zuijderduijn L, Mariani A, Pellari S, Carubia F, Luciani G, Balsamo M, Zolesi V, Ochoa J, Sen P, Watt JA, Doswald- Winkler J, Herová M, Rattenbacher B, Wadsworth J, Everroad RC, Demets R.	SP	<u>Microbially-Enhanced Vanadium Mining and Bioremediation Under Micro- and Mars Gravity on the International Space Station.</u>	Front Microbiol. <u>12</u> <u>Apr 1</u>	DOI: 10.3389/fmicb.2021.64138 7. eCollection 2021. PMID: 33868198
<b>2021</b>	Izzo LG, Mickens MA, Aronne G, Gómez C.	C4b	<u>Spectral effects of blue and red light on growth, anatomy, and physiology of lettuce.</u>	Physiol Plant. 2021 <u>Mar 13.</u>	DOI: 10.1111/ppl.13395. PMID: 33715155
<b>2021</b>	Izzo LG, Aronne G.	C4b	<u>Root Tropisms: New Insights Leading the Growth Direction of the Hidden Half.</u>	Plants (Basel). 2021 <u>10(2):2</u> <u>20 Jan 23</u>	DOI: 10.3390/plants10020220. PMID: 33498761
<b>2021</b>	Ciurans C, Bazmohammadi N, Vazquez J.C, Dussap C-G , Guerrero J.M, Godia F	MPP, Mo, LSS	<u>Hierarchical Control of Space Closed Ecosystems</u> <u>Expanding Microgrid Concepts to Bioastronautics</u>	IEEE Industrial Electronic magazine 2021 <u>January</u>	1932- 4529/21©2022 IEEE
<b>2020</b>	Brunet J.	LSS , Mo	Ingénierie de la systémique	Book <u>Tome 3</u>	ISBN

			<u>Tome3 : Un système régénératif pour le spatial :</u> Application au projet MELiSSA	112pp	97910343503 91 (English version in prep.)
<b>2020</b>	Cockell CS, Santomartino R, Finster K, Waajen AC, Eades LJ, Moeller R, Rettberg P, Fuchs FM, Van Houdt R, Leys N, Coninx I, Hatton J, Parmitano L, Krause J, Koehler A, Caplin N, Zuijderduijn L, Mariani A, Pellari SS, Carubia F, Luciani G, Balsamo M, Zolesi V, Nicholson N, Loudon CM, Doswald-Winkler J, Herová M, Rattenbacher B, Wadsworth J, Craig Everroad R, Demets R.	SP	Space station biomining experiment demonstrates rare earth element extraction in microgravity and Mars gravity	Nature Commun. 11 (1) 5523. Nov 10; DOI: 10.1038/s41467-020-19276-w. PMID: 33173035	
<b>2020</b>	Aronne G, Romano L E, Izzo LG	C4b	Subsequent inclusion/exclusion criteria to select the best species for an experiment performed on the ISS in a refurbished hardware	Life Sciences in Space Research 27: 19-26	DOI: 10.1016/j.lssr.2020.07.002. Jul 11. PMID: 34756226
<b>2020</b>	Santomartino R, Waajen AC, De Wit W, Nicholson N, Parmitano L, Loudon C-M, Moeller R, Rettberg P, Fuchs FM, Van Houdt R, Finster KW, Coninx I, Krause J, Koehler A, Caplin N, Zuijderduijn L, Zolesi V, Balsamo M, Mariani A, Pellari S S, Carubia F, Luciani G, Leys N, Doswald-Winkler J, Herová M, Wadsworth J, Everroad C, Rattenbacher B, Demets R, Cockell C .	SP, LSS	No effect of microgravity and simulated Mars gravity on final bacterial cell concentrations on the International Space Station: applications to space bioproduction	Front. Microbiol. section Extreme Microbiology	

<b>2020</b>	Lindeboom, R.E.F., De Paepe J., Vanoppen, M., Alonso Fariñas, B., Coessens, W., Alloul, A., Christiaens, M.E.R., Dotremont, C., Beckers, H., Lamaze, B., Demey, D., Clauwaert, P., Verliefde, A.R.D., Vlaeminck, S.E.	SP, C3	A five-stage treatment train for water recovery from urine and shower water for long-term human Space missions	Desalination	495	114634
<b>2020</b>	De Paepe J, De Paepe K, Gòdia F, Rabaey K, Vlaeminck S, Clauwaert P	C3	Bio-electrochemical COD removal for energy-efficient, maximum and robust nitrogen recovery from urine through membrane aerated nitrification	Water Research	185	116223
<b>2020</b>	Duri LG , El-Nakhel C , Caporale A G, Ciriello M, Graziani G, Pannico A, Palladino M, Ritieni A, De Pascale S, Vingiani S, Adamo P , Roushael Y	C4b	Mars Regolith Simulant Ameliorated by Compost as in situ Cultivation Substrate Improves Lettuce Growth and Nutritional Aspects	Plants (Basel) May 14;9(5):628	DOI: 10.3390/plants9050628 PMID: 32423057 PMCID: PMC7285329	
<b>2020</b>	Poulet L, Dussap C-G, Fontaine J-P	Mo, C4b	Development of a mechanistic model of leaf surface gas exchange coupling mass and energy balances for life-support systems applications	Acta Astronautica	DOI: 10.1016/j.actaastro.2020.03.048	
<b>2020</b>	De Meur Q, Deutschbauer A, Koch M,	C2	New perspectives on butyrate assimilation in <i>Rhodospirillum rubrum</i> S1H under photoheterotrophic conditions	BMC Microbiology volume 20	20: 126	

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<b>2020</b>	Paradiso R, Ceriello A, Pannico A, Sorrentino S, Palladino M, Giordano M, Fortezza R, De Pascale S.	C4b	Design of a module for cultivation of tuberous plants in microgravity: The ESA Project "Precursor of Food Production Unit" (PFPUs).	Frontiers Plant Science	11 DOI: 10.3389/fpls.2020.00417
<b>2020</b>	Carillo P, Morrone B, Fusco GM, De Pascale S, Rouphael Y.	C4b	Challenges for a sustainable food production system on board of the International Space Station: A technical review.	Agronomy	10(5) <a href="https://www.mdpi.com/2073-4395/10/5/687">https://www.mdpi.com/2073-4395/10/5/687</a>
<b>2020</b>	Fahrion J, Carina C, Zabel P, Schubert D, Mysara M, Van Houdt R, Eikmanns B, Bebblo- Vranesovic K, Rettberg P	C4b, SP, LSS	Microbial Monitoring in the EDEN ISS Greenhouse, a Mobile Test Facility in Antarctica	Front. Microbiol. 2020	11:525 Mar 31
<b>2020</b>	Bayon-Vicente G, Wattiez R, Leroy B.	C2	Global Proteomic Analysis Reveals High Light Intensity Adaptation Strategies and Polyhydroxyalkanoate Production in <i>Rhodospirillum rubrum</i> Cultivated With Acetate as Carbon Source.	Front Microbiol. 2020 11:464. Mar 25;	DOI: 10.3389/fmicb.2020.00464. eCollection 2020. PMID: 32269553

<b>2020</b>	De Paepe J, De Pryck L, Verliefde A, Rabaey K, Clauwaert P	C3	Electrochemically Induced Precipitation Enables Fresh Urine Stabilization and Facilitates Source Separation	Environmental Science & Technology	54(6) 3618-3627	DOI: 10.1021/acs.est.9b06804
<b>2020</b>	Peiro E, Pannico A, Colleoni SG, Buccieri L, Roushail Y, De Pascale S, Paradiso R, Gòdia F	C4b	Air Distribution in a Fully-closed Higher Plant Growth Chamber Impacts Crop Performance of Hydroponically-grown Lettuce	Frontiers in Plant Science	10	DOI : 103389/fpls.2020.00537
<b>2020</b>	Poughon L, Laroche C, Creuly C, Dussap CG, Paille C, Lasseur C, Monsieur P, Heylen W, Coninx I, Mastroleo F, Leys N	C4a	<i>Limnospira indica</i> PCC8005 growth in photobioreactor: model and simulation of the ISS and ground experiments	Life Sciences in Space Research	LSSR26 8	DOI : 10.1016/j.lssr.2020.03.002
<b>2020</b>	Clauwaert P, De Paepe J, Jiang F, Alonso-Fariñas B, Vaiopoulou E, Verliefde A, Rabaey K	C3, LSS	Electrochemical tap water softening: A zero chemical input approach. .	Water Res. 2020	169:115 263 Feb 1	DOI: 10.1016/j.watres.2019.115263. Epub 2019 Nov 4. PMID: 31734395
<b>2020</b>	Senatore G, Mastroleo F, Leys N, Mauriello G.	LSS, SP, C4a	Growth of <i>Lactobacillus reuteri</i> DSM17938 Under Two Simulated Microgravity Systems: Changes in Reuterin Production, Gastrointestinal Passage Resistance, and Stress Genes Expression Response	Astrobiology	20 1-14	DOI: 10.1089/ast.2019.2082
<b>2020</b>	Moreels M, Baselet B, Van Hoey O, Vanhaever F, Baatout S	SP	Stress and Radiation Responsiveness	In: Choukèr A. (ed) Stress Challenges and Immunity in Space, Springer-Verlag (Berlin-Heidelberg)	Chap 20 p373-404	DOI.org/10.1007/978-3-030-16996-1_20

<b>2020</b>	Van Houdt R, Leys N	SP	Monitoring the Microbial Burden in Manned Space Stations.	In: Choukèr A. (ed) Stress Challenges and Immunity in Space, Springer-Verlag (Berlin-Heidelberg)	Chap 25 p463-475	DOI.org/10.1007/978-3.030-16996-1_25
<b>2020</b>	Quintens R, Baatout S, Moreels M	SP	Assessment and Biomonitoring of Exposure to Space radiation	In: Choukèr A. (ed) Stress Challenges and Immunity in Space, Springer-Verlag (Berlin-Heidelberg)	Chap28 p519-533	DOI.org/10.1007/978-3.030-16996-1_28
<b>2020</b>	Capson-Tojo G, Batstone DJ, Grassino M, Vlaeminck SE, Puyol D, Verstraete W, Kleerebezem R, Oehmen A, Ghimire A, Pikaar I, Lema JM, Hülsen T,	C2	Purple phototrophic bacteria for resource recovery: Challenges and opportunities	Biotechnol Adv	43:107 567.	DOI: 10.1016/j.biotechadv.2020.107567. PMID: 32470594
<b>2020</b>	Sui Y, Vlaeminck SE.	C4a	Dunaliella Microalgae for Nutritional Protein: An Undervalued Asset.	Trends Biotechnol. Review.	38(1):1 0-12	2020 Jan;. doi: 10.1016/j.tibtech.2019.07.011. Epub 2019 Aug 23. PMID: 31451287
<b>2019</b>	Volponi M, Lasseur C	LSS, SP	Considerations on Life Support for interstellar travel: a regenerative story	Acta Futura	12: 9-25	
<b>2019</b>	Muthert LWF, Izzo LG, Van Zanten M, Aronne G.	LSS, SP, C4b	Root tropism: investigations on earth and space to unravel plant growth direction	Frontiers in Plant Science	10 : 1807	
<b>2019</b>	Izzo LG, Romano LE, De Pascale S,	SP , C4b	Chemotropic vs hydrotropic stimuli for root growth orientation in microgravity	Frontiers in Plant Science	10 : 1547	

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2019	Rouphael Y, Petropoulos SA, El- Nakhel C, Pannico A, Kyriacou MC, Giordano M, Troise AD, Vitaglione P and De Pascale S	C4b	Reducing Energy Requirements in Future Bioregenerative Life Support Systems (BLSSs): Performance and Bioactive Composition of Diverse Lettuce Genotypes Grown Under Optimal and Suboptimal Light Conditions.	Front. Plant Sci.	10:1305	DOI: 10.3389/fpls.2 019.
2019	Izzo LG, Arena C, De Micco V, Aronne G, Gomez C.	LSS, C4b	Light quality shapes morpho-functional traits and pigment content of green and red leaf cultivars of <i>Atriplex hortensis</i>	Scientia horticulturae	246 : 942- 950	
2019	El-Nakhel C, Giordano M, Pannico A, Carillo P, Fusco G-M , de Pascale S, Rouphael Y	C4b	Cultivar-Specific Performance and Qualitative Descriptors for Butterhead Salanova Lettuce Produced in Closed Soilless Cultivation as a Candidate Salad Crop for Human Life Support in Space	Life(Basel)	9(3): 661	
2019	Ilgrande C, Defoirdt T, Vlaeminck SE, Boon N, Clauwaert P.	C3	Media Optimization, Strain Compatibility, and Low- Shear Modeled Microgravity Exposure of Synthetic Microbial Communities for Urine Nitrification in Regenerative Life-Support Systems	Astrobiology	19:	DOI: · 10.1089/ast.2 018.1981
2019	Christiaens M, De Paepe J, Ilgrande C, De Vrieze J, Barys J, Teirlinck P, Meerbergen K, Lievens B, Boon N, Clauwaert P, Vlaeminck SE.	C3	Urine nitrification with a synthetic microbial community	Syst Appl Microbiol	42(6): 126021.	DOI: 10.1016/j.syap m.2019.12602 1 PMID: 31623889
2019	Yadav A, Monsieurs P, Misztak A, Waleron K, Leys N, Cuypers A, Janssen PJ	C4a	Helical and linear morphotypes of <i>Limnospira indica</i> / <i>Arthrosphaera</i> sp. PCC8005 display genomic differences and respond differently to 60Co gamma irradiation	European Journal of Phycology		DOI: 10.1080/0967 0262.2019.167 5763

<b>2019</b>	Paradiso R , de Pascale,S	C4b	Space farming to sustain human life: more than 20 years of research at the University of Naples	Chronica Horticulturae	59(2) : 13-17
<b>2019</b>	Alemany L, Peiro E, Arnau C, Garcia D, Poughon L, Cornet J-F, Dussap C-G, 2019 Gerbi O, Lamaze B, Lasseur C, Godia F	C4a, C5, MPP	Continuous controlled long-term operation and modeling of a closed loop connecting an air-lift photobioreactor and an animal compartment for the development of a life support system	Biochemical Engineering Journal	151 : 107323
<b>2019</b>	De Middeleer G, Leys N, Sas B, De Saeger S.	SP	Fungi and Mycotoxins in Space-A Review.	Astrobiology	19 (7) : 915-926 DOI: 10.1089/ast.2018.1854
<b>2019</b>	Ilgrande C, Mastroleo F, Christiaens M, Lindeboom R, Prat D, Van Hoey O, Ambrozova I, Coninx I, Heylen W, Pommerening-Roser, Speck E, Boon N, Vlaeminck S.E, Leys N , Clauwaert P	SP, LSS, C2,C3,C4a	Reactivation of Microbial Strains and Synthetic Communities After a Spaceflight to the International Space Station: Corroborating the Feasibility of Essential Conversions in the MELiSSA Loop	Astrobiology	19 (9) DOI: 10.1089/ast2018.1973
<b>2019</b>	Alloul A, Wuyts S, Lebeer S, Vlaeminck SE	C2, LSS	Volatile fatty acids impacting phototrophic growth kinetics on purple bacteria : Paving the way for production on fermented wastewater	Water Research	152 : 138-147
<b>2019</b>	Muys M, Sui Y, Schwaiger B, Lesueur C, Vandenheuvel D, Vermeir P, Vlaeminck S.E	C4a, LSS	High variability in nutritional value and safety of commercially available <i>Chlorella</i> and <i>Spirulina</i> biomass indicates the need for smart production strategies	Bioresource Technology	275: 245-257

<b>2019</b>	Christiaens M, Udert K, Arends JBA, Huysman S, Vanhaecke L, McAdam E, Rabaey K.	C3	Membrane stripping enables effective electrochemical ammonia recovery from urine while retaining microorganisms and micropollutants	Water Res.	150 : 349-57.	DOI: 10.1016/j.watres.2018.11.072. Epub 2018 Nov 30.
<b>2019</b>	Zhang D, Luther A, Clauwaert P, Ronsse F	C1	Mild temperature hydrothermal oxidation of anaerobic fermentation filtrate for carbon and nitrogen recovery in a regenerative life support system	The Journal of Supercritical Fluids	145 : 39-47	
<b>2018</b>	Poulet L, Fontaine JP, Dussap CG	C4b	A Physical Modeling Approach for Higher Plant Growth in Reduced Gravity Environments	Astrobiology	18: 1093- 1100	DOI: 10.1089/ast.2017.1804. Epub 2018
<b>2018</b>	Paradiso R., Arena C., Rouphael Y., d'Aquino L., Makris K., Vitaglione P., De Pascale S.	C4b	Growth, photosynthetic activity and tuber quality of two potato cultivars in controlled environment as affected by light source	Plant Biosystems		DOI.org/ 10.1080/ 11263504.2018. 1549603
<b>2018</b>	Ilgrande C, Leroy B, Wattiez R, Vlaeminck S E, Boon N, Clauwaert P	C3	Metabolic and Proteomic Responses to Salinity in Synthetic Nitrifying Communities of <i>Nitrosomonas</i> spp. and <i>Nitrobacter</i> spp.	Frontiers in Microbiology		10.3389/fmicb2018.02914
<b>2018</b>	Sachdeva N, Mascolo C, Wattiez R, Leroy B	C4a	Embedding photosynthetic biorefineries with circular economies: Exploring the waste recycling potential of <i>Arthrosphaera</i> sp. to produce high quality byproducts	Bioresource Technology	268: 237- 246	
<b>2018</b>	Sachdeva N, Giamballesi G, Poughon L, Cabrera JC, Leroy B, Lasseur C, Dussap C-G, Wattiez R	C4a	Assessment of transient effects of alternative nitrogen sources in continuous cultures of <i>Arthrosphaera</i> sp. using proteomic, modeling and biochemical tools	Bioresource Technology	267: 492- 561	

<b>2018</b>	Senatore G, Mastroleo F, Leys N, Mauriello G.	SP	Effect of microgravity & space radiation on microbes	Future Microbiol	13 : 831- 847	DOI: 10.2217/fmb-2017-0251 PMID: 29745771.
<b>2018</b>	Christiaens M, De Vrieze J, Clinckemaillie L, Ganigué R, Rabaey K	C3	Anaerobic ureolysis of source-separated urine for NH3 recovery enables the removal of divalent ions at the toilet	Water Research	148 : 97-105	DOI: 10.1016/j.watres.2018.10.021. PMID: 30352325
<b>2018</b>	Lindeboom R, Ilgrande C, Carvajal-Arroyo J, Coninx I, Van Hoey O, Roume H, Morozova J, Udert K, Sas B, Paille C, Lasseur C, Ilyin V, Clauwaert P, Leys N, Vlaeminck SE	SP, C3	Nitrogen cycle microorganisms can be reactivated after Space exposure	Nature <i>Scientific Reports</i>	8 : 13783	DOI:10.1038/s41598-018-32055-4
<b>2018</b>	Maarten M, Coppens J, Boon N, Vlaeminck SE	C3	Photosynthetic oxygenation for urine nitrification	Water Science & Technology	78 : 183- 194	
<b>2018</b>	Aronne G, Izzo LG, Romano LE, De Francesco S, De Micco V, De Pascale S., Carrubba E, Neri G, Galoforo G, Piccirillo S.	SP , C4b	Multitrop: the challenge of using refurbished hardware for an educational and scientific experiment on the ISS	Proceedings International Astronautical Congress	Volume E1 Pp3-6	
<b>2018</b>	Izzo LG, Mickens MA, Aronne G, Gomez G	LSS, C4b	Gas exchange and leaf anatomy of lettuce in response to red and blue sole-source lighting from LEDs	Proceedings International Astronautical Congress	Volume A1 Pp7-16	

2018	De Paepe J, Lindeboom REF, Vanoppen M, De Paepe K, Demey D, Coessens W, Lamaze B, Verliefde ARD, Clauwaert P, Vlaeminck SE.	C3	Refinery and concentration of nutrients from urine with electrodialysis enabled by upstream precipitation and nitrification.	Water Res.	144 : 76-86	DOI: 10. 1016/ j.watres .2018.07 .016.
2018	Zhang D, Clauwaert P, Luther A, López Barreiro D, Prins W, Wim Brilman DWF, Ronsse F.	LSS, C1	Sub- and supercritical water oxidation of anaerobic fermentation sludge for carbon and nitrogen recovery in a regenerative life support system	Waste Management	77 : 268- 275	DOI: 10.1016/ j.wasman .2018.04 .008. PMID 29685602
2018	Loudon, C. M., Nicholson, N., Finster, K., Leys, N., Byloos B, Van Houdt, R., Rettberg, P., Moeller, R., Fuchs, F., Demets, R., Krause, J., Vukich, M., Mariani, A. & Cockell, C	SP	BioRock: new experiments and hardware to investigate microbe–mineral interactions in space	Int. J. Astrobiol.	17 : 303–13	DOI: 10.1017/ S14735504170 00234
2018	Van Houdt R, Kokkonen E, Lehtimäki M, Pasanen P, Leys N, Kulmala I	SP	Requirements for modeling airborne microbial contamination in space stations	Acta Astronautica	144 : 380- 387	
2018	De Meur Q, Deutschbauer A, Koch M, Wattiez R, Leroy B.	C2	Genetic Plasticity and Ethylmalonyl Coenzyme A Pathway during Acetate Assimilation in <i>Rhodospirillum rubrum</i> S1H under Photoheterotrophic Conditions	Appl Environ Microbiol.	84	DOI: 10.1128/ AEM .02038-17. PMID: 29180364
2017	Salmela A, Kokkonen E, Kulmala I, Veijalainen V, van Houdt R, Leys N,	SP	Production and characterization of bioaerosols for model validation in spacecraft environment	J. Environ. Sci.	69 : 227- 238	DOI: <a href="https://doi.org/10.1016/j.jes.2017.10.016">10.1016/j.jes.2017.10.016</a>

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<b>2017</b> Defoirdt T , Vlaeminck S, Sun X, Nico Boon N., and Clauwaert P.	C3	Ureolytic Activity and Its Regulation in <i>Vibrio campbellii</i> and <i>Vibrio harveyi</i> in Relation to Nitrogen Recovery from Human Urine	Environ. Sci. Technol.	51 : 13335- 13343 DOI : 10.1021/ acs.est. 7b03829
<b>2017</b> Kyriacou MC, De Pascale S, Kyratzis A, Rouphael Y.	LSS, C4b	Microgreens as a Component of Space Life Support Systems: A Cornucopia of Functional Food.	Front Plant Sci.	8:1587 DOI: 10.3389/ fpls.2017 .01587.
<b>2017</b> N. Cruvellier, L. Poughon, C. Creuly, C.- G. Dussap, and C. Lasseur	C3/Mo	High ammonium loading and nitrification modelling in a fixed-bed bioreactor	J. Water Process Eng	20 : 90-96
<b>2017</b> Clauwaert P., Muys M., Alloubl A., De Paepe J., Luther A., Sun X., Ilgrande C., Christiaens M., Hu X., Zhang D., Lindeboom R., Sas B., Rabaey K., Boon N., Frederik Ronsse F., Geelen D, Vlaeminck S.	C3, LSS	Nitrogen cycling in Bioregenerative Life Support Systems: Challenges for waste refinery and food production processes	Progress in Aerospace Sciences	91 : 87-98
<b>2017</b> Byloos B, Coninx I, Van Hoey O, Cockell C, Nicholson N, Ilyin V, Van Houdt R, Boon N, Leys N	SP	The Impact of Space Flight on Survival and Interaction of <i>Cupriavidus metallidurans</i> CH34 with Basalt, a Volcanic Moon Analog Rock	Frontiers in Microbiology	DOI: 10.3389/ fmicb.2017 .00671
<b>2017</b> Paradiso R, Arena C, De Micco V, Giordano M, Aronne G, De Pascale S.	C4b	Changes in Leaf Anatomical Traits Enhanced Photosynthetic Activity of Soybean Grown in Hydroponics with Plant Growth-Promoting Microorganisms.	Frontiers in Plant Science	8:674 DOI: 10.3389/ fpls.2017

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2017	Deschoenmaeker F, Bayon-Vicente G, Sachdeva N, Depraetere O, Cabrera Pino JC, Leroy B, Muylaert K, Wattiez R.	C4a	Impact of different nitrogen sources on the growth of <i>Arthrospira</i> sp. PCC 8005 under batch and continuous cultivation - A biochemical, transcriptomic and proteomic profile.	Bioresource Technology  DOI: <a href="http://dx.doi.org/10.1016/">http://dx.doi.org/10.1016/</a>
2017	Sheridan C, Depuydt P, De Ro M, Petit C, Van Gysegem E, Delaere P, Dixon M, Stasiak M, Aciksöz SB, Frossard E, Paradiso R, De Pascale S, Ventorino V, De Meyer T, Sas B, Geelen D.	C4b	Microbial Community Dynamics and Response to Plant Growth-Promoting Microorganisms in the Rhizosphere of Four Common Food Crops Cultivated in Hydroponics.	Microbial Ecology 73 : 378-393
2016	Poulet L, Fontaine J-P, Dussap C-G	Mo/ C4b	Plant's response to space environment: a comprehensive review including mechanistic modelling for future space gardeners	Botany Letters 163 : 337-347
2016	Verstraete W1, Clauwaert P1, Vlaeminck SE2.	LSS/SP	Used water and nutrients: Recovery perspectives in a 'panta rhei' context	Bioresource Technology 215 : 99-208
2016	Coppens J, Lindeboom R, Muys M, Coessens W, Alloul A, Meerbergen K, Lievens B, Clauwaert P, Boon N, Vlaeminck SE.	C3,C4a	Nitrification and microalgae cultivation for two-stage biological nutrient valorization from source separated urine.	Bioresource Technology 211 : 41-50

<b>2016</b>	Buysschaert B, Byloos B, Leys N, Van Houdt R, Boon N.	SP	Reevaluating multicolor flow cytometry to assess microbial viability	Applied Microbiology & Biotechnology	100 : 9037-51
<b>2016</b>	Bryce CC, Le Bihan T, Martin SF, Harrison JP, Bush T, Spears B, Moore A, Leys N, Byloos B, Cockell CS	SP	Rock geochemistry induces stress and starvation responses in the bacterial proteome	Environmental Microbiology	18 : 1110-21
<b>2016</b>	Cruvellier N, Poughon L, Creuly C, Dussap CG, Lasseur C.	C3/Mo	Growth modelling of <i>Nitrosomonas europaea</i> ATCC® 19718 and <i>Nitrobacter winogradskyi</i> ATCC® 25391: A new online indicator of the partial nitrification	Bioresource Technology	220 : 369-77
<b>2016</b>	Deschoenmaeker F, Facchini R, Cabrera Pino JC, Bayon-Vicente G, Sachdeva N, Flammang P, Wattiez R.	C4a	Nitrogen depletion in <i>Arthrospira</i> sp. PCC 8005, an ultrastructural point of view.	Journal of Structural Biology	196 : 385-93
<b>2016</b>	Condori S, Atkinson S, Leys N, Wattiez R, Mastroleo F.	C2	Construction and phenotypic characterization of M68, an Rrl quorum sensing knockout mutant of the photosynthetic alphaproteobacterium <i>Rhodospirillum rubrum</i> .	Research in Microbiology	167 : 380-92
<b>2015</b>	Paradiso, R.; Buonomo, R.; Dixon, M. A.; Barbieri, G.; De Pascale, S.	C4b	Effect of bacterial root symbiosis and urea as source of nitrogen on performance of soybean plants grown hydroponically for Bioregenerative Life Support Systems (BLSSs)	Frontiers in Plant Science	6:888 DOI:10.3389/fpls.2015.00888
<b>2015</b>	Leroy B, De Meur Q, Moulin C, Wegria G, Wattiez R	C2	New insight in the photoheterotrophic growth of the icl- purple bacterium <i>Rhodospirillum rubrum</i> on acetate.	Microbiology	161 : 61-72
<b>2015</b>	Badri H, Monsieurs P, Coninx I, Nauts R, Wattiez R, Leys N.	SP/C4a	Temporal Gene Expression of the Cyanobacterium <i>Arthrospira</i> in Response to Gamma Rays.	PLoS One.	10(8):e013556 DOI: 10.1371/journal.pone.0135565.

2015	Depraetere O, Pierre G, Deschoenmaeker F, Badri H, Foubert I, Leys N, Markou G, Wattiez R, Michaud P, Muylaert K	C4a	Harvesting carbohydrate-rich <i>Arthrospira platensis</i> by spontaneous settling	Bioresource technology	180 : 16-21
2015	Depraetere O, Deschoenmaeker F, Badri H, Monsieurs P, Foubert I, Leys N, Wattiez R, Muylaert K	C4a	Trade-Off between Growth and Carbohydrate Accumulation in Nutrient-Limited <i>Arthrospira</i> sp. PCC 8005 Studied by Integrating Transcriptomic and Proteomic Approaches.	PLoS One. 2015	10(7):e0132461.. DOI: 10.1371/journal.pone.0132461
2015	Badri H, Monsieurs P, Coninx I, Wattiez R, Leys N	C4a/SP	Molecular investigation of the radiation resistance of edible cyanobacterium <i>Arthrospira</i> sp. PCC 8005	Microbiology Open	DOI:10.1002/mbo3.229
2014	Yamaguchi N, Roberts M, Castro S, Oubre C, Makimura K, Leys N, Grohmann E, Sugita T, Ichijo T, Nasu M.	SP	Microbial monitoring of crewed habitats in space-current status and future perspectives	Microbes Environ.	29 : 250-260 PMID: 25130885
2014	Michaud L, Lo Giudice A, Mysara M, Monsieurs P, Raffa C, Leys N, Amalfitano S, Van Houdt R.	SP	Snow surface microbiome on the High Antarctic Plateau (DOME C)	PLoS One	9(8):e104505. DOI: 10.1371/journal.pone.0104505.
2014	Monsieurs P, Mijnendonckx K, Provoost A, Venkateswaran K, Ott	SP	Genome Sequences of <i>Cupriavidus metallidurans</i> Strains NA1, NA4, and NE12, Isolated from Space Equipment.	Genome Announcement	pii: e00719-14. DOI: 10.1128/genomeA.00719-14.

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<b>2014</b>	Monsieurs P, Mijnendonckx K, Provoost A, Venkateswaran K, Ott CM, Leys N, Van Houdt R.	SP	Draft Genome Sequences of <i>Ralstonia pickettii</i> Strains SSH4 and CW2, Isolated from Space Equipment.	Genome Announcement July 24	2(4):e0 0719- 14	DOI: 10.1128/geno meA.00887- 14.
<b>2014</b>	Paradiso, R.; Buonomo, R.; Dixon, M. A.; Barbieri, G.; De Pascale, S.	C4b	Soybean cultivation for Bioregenerative Life Support Systems (BLSSs): The effect of hydroponic system and nitrogen source	Advances in Space Research	53 : 574- 584	
<b>2014</b>	Wolff, S. A.; Coelho, L. H.; Karoliussen, I.; Jost, A. I.	C4b/SP	Effects of the Extraterrestrial Environment on Plants: Recommendations for Future Space Experiments for the MELiSSA Higher Plant Compartment	Life	4 : 89-204	
<b>2014</b>	Paradiso, R.; De Micco, V.; Buonomo, R.; Aronne, G.; Barbieri, G.; De Pascale, S.	C4b	Soilless cultivation of soybean for Bioregenerative Life-Support Systems: a literature review and the experience of the MELiSSA Project - Food characterisation Phase I	Plant Biology	16 : 9-78	
<b>2014</b>	De Micco V., De Pascale S., Paradiso R., Aronne G	SP /C4b	Microgravity effects on different stages of higher plant life cycle and completion of the seed-to-seed cycle.	Plant Biology	16 : 1-38	
<b>2014</b>	Matallana-Surget, S.; Derock, J.; Leroy, B.; Badri, H.; Deschoenmaeker, F.; Wattiez, R.	C4a	Proteome-wide analysis and diel proteomic profiling of the cyanobacterium <i>Arthrosphaera platensis</i> PCC 8005	PLoS One	9(6): e99076	DOI : 10.1371/journal. .pone.0099076. eCollection 2014. PMID: 24914774 Free

<b>2014</b>	Janssen, P. J.; Lambreva, M. D.; Plumeré, N.; Bartolucci, C.; Antonacci, A.; Buonasera, K.; Frese, Raoul N.; Scognamiglio, V.; Rea, G.	C4a	Photosynthesis at the forefront of a sustainable life	Frontiers in Chemistry June12	2 :36	DOI: 10.3389/ fchem.2014.00 036 PMID: 24971306 PMCID: PMC4054791
<b>2014</b>	Deschoenmaeker, F.; Facchini, R.; Leroy, B.; Badri, H.; Zhang, C. C.; Wattiez, R.	C4a	Proteomic and cellular views of <i>Arthrosphaera</i> sp. PCC 8005 adaptation to nitrogen depletion	Microbiology	160 : 1224- 36	
<b>2013</b>	Mijnendonckx K, Provoost A, Ott CM, Venkateswaran K, Mahillon J, Leys N, Van Houdt R.	SP	Characterization of the survival ability of <i>Cupriavidus</i> <i>metallidurans</i> and <i>Ralstonia pickettii</i> from space- related environments.	Microbial Ecology	65 : 347- 360	DOI 10.1007/ s00248- 012- 0139-2 ' PMID: 23212653
<b>2013</b>	Matallana-Surget S, Wattiez R	SP/LSS	Impact of Solar Radiation on Gene Expression in Bacteria	Proteomes	1(2) : 70-86	DOI 10.3390/proteo nes1020070
<b>2013</b>	Van Houdt R, Deghorain M, Vermeersch M, Provoost A, Lo Giudice A, Leys N, Perez-Morga D, Van Melderen L, Michaud L.	SP	<u>Characterization</u> of culturable <i>Paenibacillus</i> spp. from the snow surface on the high Antarctic Plateau (DOME C) and their dissemination in the Concordia research station.	Extremophiles	17 : 65-73	
<b>2013</b>	Schiwon K, Arends K, Rogowski KM, Fürch S, Prescha K, Sakinc T, Van Houdt R, Werner G, Grohmann E.	SP	Comparison of antibiotic resistance, biofilm formation and conjugative transfer of <i>Staphylococcus</i> and <i>Enterococcus</i> isolates from International Space Station and Antarctic Research Station Concordia.	Microb Ecol.	65 : 638- 651	DOI: 10.1007/s0024 8-013-0193-4 PMID: 23411852

<b>2013</b>	Page, V.; Feller, U.	C4b	Selection and hydroponic growth of bread wheat cultivars for bioregenerative life support systems	Advances in Space Research	52 : 536-546	
<b>2013</b>	Poughon, L.; Creuly, C.; Farges, B.; Dussap, C. G.; Schiettecatte, W.; Jovetic, S.; De Wever, H.	C1	Test of an anaerobic prototype reactor coupled with a filtration unit for production of VFAs	Bioresource Technology	145 : 240-247	
<b>2013</b>	Mastroleo, F.; Van Houdt, R.; Atkinson, S.; Mergeay, M.; Hendrickx, L.; Wattiez, R.; Leys, N.	C2 SP	Modelled microgravity cultivation modulates N-acylhomoserine lactone production in <i>Rhodospirillum rubrum</i> S1H independently of cell density	Microbiology	159 : 2456-2466	
<b>2012</b>	Crabbé A, Leroy B, Wattiez R, Aertsen A, Leys N, Cornelis P, Van Houdt R.	SP	Differential proteomics and physiology of <i>Pseudomonas putida</i> KT2440 under filament-inducing conditions	BMC Microbiology	12:282. DOI: 10.1186/1471-2180-12-282	
<b>2012</b>	Van Houdt R, Leys N	SP	Chap22. Monitoring the microbial burden in manned space stations	In "Stress challenges and immunity in space " <i>From Mechanisms to Monitoring and Preventive strategies</i>	A.Chouker ed. Springer-Verlag (Berlin-Heidelberg)	DOI:10.1007/978-3-642-22272-6_22
<b>2012</b>	Van Houdt, R.; Mijnendonckx, K.; Leys, Natalie	SP	Microbial contamination monitoring and control during human space missions	Planetary and Space Science	60 : 115-120	<a href="https://doi.org/10.1016/j.pss.2011.09.001">https://doi.org/10.1016/j.pss.2011.09.001</a> ISSN 0032-0633

<b>2012</b>	Stasiak, M.; Gidzinski, D.; Jordan, M.; Dixon, M..	C4b	<a href="#">Crop selection for advanced life support systems in the ESA MELiSSA program: Durum wheat (<i>Triticum turgidum var durum</i>)</a>	Advances in Space Research	49 : 1684-1690
<b>2012</b>	Molders, K.; Quinet, M.; Decat, J.; Secco, B.; Dulière, E.; Pieters, S.; van der Kooij, T.; Lutts, S.; Van Der Straeten, D.	C4b	<a href="#">Selection and hydroponic growth of potato cultivars for bioregenerative life support systems</a>	Advances in Space Research	50 : 156-165
<b>2012</b>	Paradiso, R.; Buonomo, R.; De Micco, V.; Aronne, G.; Palermo, M.; Barbieri, G.; De Pascale, S.	C4b LSS	Soybean cultivar selection for Bioregenerative Life Support Systems (BLSSs) – Hydroponic cultivation	Advances in Space Research	50 : 1501-11
<b>2012</b>	De Micco, V.; Buonomo, R.; Paradiso, R.; De Pascale, S.; Aronne, G.	C4b LSS	Soybean cultivar selection for Bioregenerative Life Support Systems (BLSS) – Theoretical selection	Advances in Space Research	49 : 1415-21
<b>2012</b>	Palermo M., Paradiso R., De Pascale S., Fogliano V	C4b	Hydroponic cultivation improves the nutritional quality of soybean and its products.	Journal of Agricultural and Food Chemistry	60 : 250-255
<b>2012</b>	De Micco V., Paradiso R., Aronne G., Fogliano V., De Pascale S.	C4b LSS	Agronomical and nutritional characterization of soybean for BLSS: lessons learned from the MELiSSA project – Food characterization phase I	Proceedings 63rd International Astronautical Congress (IAC), Naples, Italy, 1-5 October 2012	Vol 2 : 1354-60
<b>2012</b>	Farges, B.; Poughon, L.; Roriz, D.; Creuly, C.; Dussap, C. G.; Lasseur, C.	C3	Axenic cultures of <i>Nitrosomonas europaea</i> and <i>Nitrobacter winogradskyi</i> in autotrophic conditions: a new protocol for kinetic studies	Applied Biochemistry and Biotechnology	167 : 1076-1091
<b>2011</b>	Crabbé, A.; Schurr, M. J.; Monsieurs, P.; Morici, L.; Schurr, J.; Wilson, J. W.; Ott, C.	SP	Transcriptional and proteomic responses of <i>Pseudomonas aeruginosa</i> PAO1 to spaceflight conditions involve Hfq regulation and reveal a role for oxygen	Applied and Environmental Microbiology	77 : 1221-1230

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2011	Crabbé, A.; Sarker, S. F.; Van Houdt, R.; Ott, C. M.; Leys, N.; Cornelis, P.; Nickerson, C. A.	SP	Alveolar epithelium protects macrophages from quorum sensing-induced cytotoxicity in a three- dimensional co-culture model	Cellular Microbiology	13 : 469- 481
2010	Lasseur, C.; Brunet, J.; De Wever, H.; Dixon, M.; Dussap, C. G.; Godia, F.; Leys, N.; Mergeay, M.; Van der Straeten, D.	LSS	MELiSSA: The European project of closed life support system	Gravitational and Space Research	23 : 3-12
2010	Cornet, J. F.	Mo/C4a	Calculation of optimal design and ideal productivities of volumetrically lightened photobioreactors using the constructal approach	Chemical Engineering Science	65 : 985- 998
2010	Pycke BF, Vanermen G, Monsieurs P, De Wever H, Mergeay M, Verstraete W, Leys N	C2	Toxicogenomic response of <i>Rhodospirillum rubrum</i> S1H to the micropollutant triclosan.	Applied and Environmental Microbiology	76: 3503- 3513
2010	Pycke, B. F. G.; Crabbé, A.; Verstraete, W.; Leys, N.	C2	Characterization of triclosan-resistant mutants reveals multiple antimicrobial resistance mechanisms in <i>Rhodospirillum rubrum</i> S1H	Applied and Environmental Microbiology	76 : 3116- 3123
2010	Olsson-Francis K, Van Houdt R, Mergeay M, Leys N, Cockell CS	SP	Microarray analysis of a microbe-mineral interaction	Geobiology	8: 446- 456
2010	Morin, N.; Vallaeys, T.; Hendrickx, L.; Leys, N.; Wilmette, A.	C4a	An efficient DNA isolation protocol for filamentous cyanobacteria of the genus <i>Arthrosphaera</i>	Journal of Microbiological Methods	80 : 148- 154
2010	Janssen, P. J.; Morin, N.; Mergeay, M.; Leroy, B.; Wattiez, R.;	C4a	Genome sequence of the edible cyanobacterium <i>Arthrosphaera</i> sp. PCC 8005	Journal of Bacteriology	192 : 2465- 2466

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<b>2010</b>	Crabbé, A.; Pycke, B.; Van Houdt, R.; Monsieurs, P.; Nickerson, C.; Leys, N.; Cornelis, P.	SP	Response of <i>Pseudomonas aeruginosa</i> PAO1 to low shear modelled microgravity involves AlgU regulation	Environmental Microbiology	12 : 1545- 1564
<b>2010</b>	TIKHOMIROVA N., LAWSON J., STASIAK M., DIXON M., PAILLE C., PEIRO E., FOSSEN A., GODIA F	C4b/MPP	Production characteristics of lettuce <i>Lactuca sativa</i> L. in the frame of the first crop tests in the higher plant chamber integrated into the MELISSA Pilot Plant	COSPAR, Bremen	
<b>2009</b>	Beuls E1, Van Houdt R, Leys N, Dijkstra C, Larkin O, Mahillon J.	SP	<i>Bacillus thuringiensis</i> conjugation in simulated microgravity.	Astrobiology	9(8) : 797- 805
<b>2009</b>	Poughon, L.; Farges, B.; Dussap, C. G.; Godia, F.; Lasseur, C.	LSS/MPP/Mo	Simulation of the MELISSA closed loop system as a tool to define its integration strategy	Advances in Space Research	44 : 1392- 1403
<b>2009</b>	Van Houdt, R.; De Boever, P.; Coninx, I.; Le Calvez, C.; Dicasillati, R.; Mahillon, J.; Mergeay, M.; Leys, N.	SP	Evaluation of the airborne bacterial population in the periodically confined Antarctic base Concordia	Microbial Ecology	57 : 640- 648
<b>2009</b>	Mastroleo, F.; Van Houdt, R.; Leroy, B.; Benotmane, M. A.; Janssen, A.; Mergeay, M.; Vanhavere, F.;	C2	Experimental design and environmental parameters affect <i>Rhodospirillum rubrum</i> S1H response to space flight	The ISME Journal	3 : 1402- 1419

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2009	Mastroleo, F.; Leroy, B.; Van Houdt, R.; s' Heeren, C.; Mergeay, M.; Hendrickx, L.; Wattiez, R.	C2	Shotgun proteome analysis of <i>Rhodospirillum rubrum</i> S1H: integrating data from gel-free and gel-based peptides fractionation methods	Journal of Proteome Research	8 : 2530-2541
2009	Leys, N.; Baatout, S.; Rosier, C.; Dams, A.; s'Heeren, C.; Wattiez, R.; Mergeay, M.	SP	The response of <i>Cupriavidus metallidurans</i> CH34 to spaceflight in the international space station	Antonie Van Leeuwenhoek	96 : 227-245
2009	De Gusseme, B.; Pycke, B.; Hennebel, T.; Marcoen, A.; Vlaeminck, S. E.; Noppe, H.; Boon, N.; Verstraete, W.	C3	Biological removal of 17alpha-ethinylestradiol by a nitrifier enrichment culture in a membrane bioreactor	Water Research	43 : 2493-2503
2009	Cornet, J. F.; Dussap, C. G.	Mo/C4a	A simple and reliable formula for assessment of maximum volumetric productivities in photobioreactors	Biotechnology Progress	25 : 424-435
2009	Farges B, Laroche C, Cornet JF, Dussap CG.	C4a/Mo	Spectral kinetic modeling and long-term behavior assessment of <i>Arthrospira platensis</i> growth in photobioreactor under red (620 nm) light illumination.	Biotechnol Prog.	25 : 151-162 DOI: 10.1002/btpr. 5. PMID: 19224572
2009	Christophe, G.; Guiavarch, E.; Creuly, C.; Dussap, C. G.	C1/Mo	Growth monitoring of <i>Fibrobacter succinogenes</i> by pressure measurement	Bioprocess and Biosystems Engineering	32 : 123-128
2008	Wilson JW, Ott CM, Quick L, Davis R, Honer zu Bentrup K, Crabbe A, Richter E, Sarker S, Barrila J, Porwollik S,	SP	Media ion composition controls regulatory and virulence response of <i>Salmonella</i> in spaceflight.	PLoS One	3 : e3923

Cheng P, McClelland M, Tsaprailis G, Radabaugh T, Hunt A, Shah M, Nelman-Gonzalez M, Hing S, Parra M, Dumars P, Norwood K, Bober R, Devich J, Ruggles A, CdeBaca A, Narayan S, Benjamin J, Goulart C, Rupert M, Catella L, Schurr MJ, Buchanan K, Morici L, McCracken J, Porter MD, Pierson DL, Smith SM, Mergeay M, Leys N, Stefanyshyn-Piper HM, Gorie D, Nickerson CA					
<b>2008</b>	Montràs, A.; Pycke, B.; Boon, N.; Gòdia, F.; Mergeay, M.; Hendrickx, L.; Pérez, J.	C3	Distribution of <i>Nitrosomonas europaea</i> and <i>Nitrobacter winogradskyi</i> in an autotrophic nitrifying biofilm reactor as depicted by molecular analyses and mathematical modelling	Water Research	42 : 1700- 1714
<b>2008</b>	Rossi N, Derouinot- Chaplain M, Jaouen P, Legentilhomme P, Petit I.		<i>Arthrosphaera platensis</i> harvesting with membranes: fouling phenomenon with limiting and critical flux	Bioresource Technology (Sept 2008)	99, 6162- 6167
<b>2008</b>	Ushakova SA, Zolotukhin IG, Tikhomirov AA, Tikhomirova NA, Kudenko YA,	LSS	Some methods for human liquid and solid waste utilization in bioregenerative life-support systems.	Appl Biochem Biotechnol.	151 : 576-685
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	Gribovskaya IV, Balnokin Y, Gros JB.				
<b>2008</b>	Farges, B.; Poughon, L.; Creuly, C.; Cornet, J. F.; Dussap, C. G.; Lasseur, C.	Mo/LSS	Dynamic aspects and controllability of the MELiSSA project: a bioregenerative system to provide life support in space	Appl Biochem Biotechnol	151 : 686- 699
<b>2008</b>	Crabbé, A.; De Boever, P.; Van Houdt, R.; Moors, H.; Mergeay, M.; Cornelis, P.	SP	Use of the rotating wall vessel technology to study the effect of shear stress on growth behaviour of <i>Pseudomonas aeruginosa</i> PA01	Environmental Microbiology	10 : 2098- 2110
<b>2007</b>	Quanten, L.; Chaerle, L.; Noben, J. P.; Van Onckelen, H.; Prinsen, E.; Van Der Straeten, D.; Valcke, R.	C4b	Effects of tetracycline on wild-type and inducible P35S::IPT-5/TETR transgenic tobacco plants	Physiologia Plantarum	130 : 290- 300
<b>2007</b>	Chaerle, L.; Hagenbeek, D.; De Bruyne, E.; Van Der Straeten, D.	C4b	Chlorophyll fluorescence imaging for disease-resistance screening of sugar beet	Plant Cell, Tissue and Organ Culture	91 : 97-106
<b>2007</b>	Chaerle, L.; Hagenbeek, D.; Vanrobaeys, X.; Van Der Straeten, D.	C4b	Early detection of nutrient and biotic stress in <i>Phaseolus vulgaris</i>	International Journal of Remote Sensing	28 : 3479- 3492
<b>2007</b>	Baatout, S.; Leys, N.; Hendrickx, L.; Dams, A.; Mergeay, M.	SP	Physiological changes induced in bacteria following pH stress as a model for space research	Acta Astronautica	60 : 451- 459
<b>2007</b>	Lenk, S.; Chaerle, L.; Pfündel, E. E.; Langsdorf, G.; Hagenbeek, D.; Lichtenthaler, H. K.; Van Der Straeten, D.; Buschmann, Claus	C4b	Multispectral fluorescence and reflectance imaging at the leaf level and its possible applications	Journal of Experimental Botany	58 : 807- 814

<b>2007</b>	Hendrickx, L.; Mergeay, M.	LSS	From the deep sea to the stars: human life support through minimal communities	Current Opinion in Microbiology	10 : 231-237
<b>2007</b>	Chaerle, L.; Lenk, S.; Hagenbeek, D.; Buschmann, C.; Van Der Straeten, D	C4b	Multicolor fluorescence imaging for early detection of the hypersensitive reaction to tobacco mosaic virus	Journal of Plant Physiology	164 : 253-262
<b>2007</b>	Chaerle, L.; Leinonen, I.; Jones, H. G.; Van Der Straeten, D.	C4b	Monitoring and screening plant populations with combined thermal and chlorophyll fluorescence imaging	Journal of Experimental Botany	58 : 773-784
<b>2007</b>	De Boever P, Ilyin V, Forget-Hanus D, Van der Auwera G, Mahillon J, Mergeay M	SP	Conjugation-mediated plasmid exchange between bacteria grown under space flight conditions	Microgravity science & technology	19 : 138-144
<b>2006</b>	Hendrickx, L.; De Wever, H.; Hermans, V.; Mastroleo, F.; Morin, N.; Wilmette, A.; Janssen, P.; Mergeay, M.	LSS	Microbial ecology of the closed artificial ecosystem MELiSSA (Micro-Ecological Life Support System Alternative): reinventing and compartmentalizing the Earth's food and oxygen regeneration system for long-haul space exploration missions	Research in Microbiology	157 : '77-86
<b>2006</b>	De Wever H, Van Hoof V, Dotremont Ch, Diels L, Doulami F, Demey D, Jaouen P, Lasseur C		Harvesting technology for <i>Arthospira platensis</i> in advanced Life Support System	« Current topics on bioprocesses in food Industry » Eds Laroche C, Dussap CG and A. Pandey, Delhi, Asiatech Publishers Inc., pp 476, chapter 1.2	ISBN 81876 80148 KK-443686
<b>2006</b>	Novikova N, De Boever P, Poddubko S, Deshevaya E, Polikarpov	SP	Survey of environmental biocontamination on board the International Space Station	Research in Microbiology	157 : 5-12

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<b>2006</b>	Mergeay,M.	SP/LSS	Editorial of a special issue about Space microbiology	Research in Microbiology	157 : 1-4
<b>2006</b>	Horneck, G.; Facius, R.; Reichert, M.; Rettberg, P.; Seboldt, W.; Manzey, D.; Comet, B.; Maillet, A.; Preiss, H.; Schauer, L.; Dussap, C. G.; Poughon, L.; Belyavin, A.; Reitz, G.; Baumstark-Khan, C.; Gerzer, R.	LSS	HUMEX, a study on the survivability and adaptation of humans to long-duration exploratory missions, part II: Missions to Mars	Mercury, Mars and Saturn	38 : 752-759
<b>2006</b>	Goossens, O.; Vanhavere, F.; Leys, N.; De Boever, P.; O'Sullivan, D.; Zhou, D.; Spurny, F.; Yukihara, E. G.; Gaza, R.; McKeever, S. W. S.	SP	Radiation dosimetry for microbial experiments in the International Space Station using different etched track and luminescent detectors	Radiation Protection Dosimetry	120 : 433-437
<b>2006</b>	Baatout, S.; De Boever, P.; Mergeay, M.	SP	Physiological changes induced in four bacterial strains following oxidative stress	Prikladnaia Biokhimiia I Mikrobiologiiia	42 : 418-427
<b>2005</b>	Cogne G, Cornet JF, Gros JB.	C4a	Design, operation, and modeling of a membrane photobioreactor to study the growth of the Cyanobacterium <i>Arthrosphaera platensis</i> in space conditions	Biotechnology Progress	21 : 741-750
<b>2005</b>	Baatout, S.; De Boever, P.; Mergeay, M.	SP	Temperature-induced changes in bacterial physiology as determined by flow cytometry	Annals of Microbiology	55 : 373-80

<b>2005</b>	Pérez, J.; Poughon, L.; Dussap, C. G.; Montesinos, J. L.; Gòdia, Francesc	C3	Dynamics and steady state operation of a nitrifying fixed bed biofilm reactor: mathematical model based description	Process Biochemistry	40 : 2359- 69
<b>2005</b>	WATERS G., GIDZINSKI D., ZHENG Y., DIXON M.	C4b	Empirical relationships between light intensity and crop net carbon exchange rate at the leaf and full canopy scale: Towards integration of a Higher Plant Compartment in MELISSA	ICES-2005-01-3071	
<b>2004</b>	Lissens G, Verstraete W, Albrecht T, Brunner G, Creuly C, Seon J, Dussap G, Lasseur C.	C1	Advanced anaerobic bioconversion of lignocellulosic waste for bioregenerative life support following thermal water treatment and biodegradation by <i>Fibrobacter succinogenes</i> .	Biodegradation.	15 : 173-183
<b>2004</b>	Pérez, J.; Montesinos, J. I.; Albiol, J.; Gòdia, F.	C3	Nitrification by immobilized cells in a micro-ecological life support system using packed-bed bioreactors: an engineering study	Journal of Chemical Technology & Biotechnology	79 : 742- 754
<b>2004</b>	Brauns, E.; Van Hoof, V.; Dotremont, C.; De Wever, H.; Lens, P.; Van Hoof, E.; Thomas, G.; Molenbergh, B.; De Mey, D.	C4a	The desalination of an <i>Arthrosphaera platensis</i> feed solution by electrodialysis and reverse osmosis	Desalination	170(4) : 123- 136
<b>2004</b>	Gòdia, F.; Albiol, J.; Pérez, J.; Creus, N.; Cabello, F.; Monràs, A.; Masot, A.; Lasseur, C.	LSS/MPP	The MELISSA pilot plant facility as as integration test-bed for advanced life support systems	Advances in Space Research	34 : 1483- 1493
<b>2003</b>	Cogne G, Gros JB, Dussap CG.	C4a	Identification of a metabolic network structure representative of <i>Arthrosphaera (Spirulina) platensis</i> metabolism.	Biotechnology and Bioengineering	84 : 567-678
<b>2003</b>	Seon, J.; Creuly, C.; Duchez, D.; Pons, A.; Dussap, C. G.	C1	Degradation of plant wastes by anaerobic process using rumen bacteria	Water Science and Technology	48 : 213- 216

<b>2003</b>	Poughon, L.; Ducheze, D.; Cornet, J. F.; Dussap, C. G.	Mo/LSS	KLa determination: comparative study for a gas mass balance method	Bioprocess and Biosystems Engineering	25 : 341- 348
<b>2003</b>	Tikhomirov AA, Ushakova SA, Manukovsky NS, Lisovsky GM, Kudenko YA, Kovalev VS, Gubanov VG, Barkhatov YV, Gribovskaya IV, Zolotukhin IG, Gros JB, Lasseur Ch.	LSS/C4b	Mass exchange in an experimental new-generation life support system model based on biological regeneration of environment.	Adv Space Res.	31 : 1711- 1720 PMID: 14503509
<b>2003</b>	Tikhomirov AA, Ushakova SA, Gribovskaya IA, Tirranen LS, Manukovsky NS, Zolotukhin IG, Karnachuk RA, Gros JB, Lasseur C	LSS/C4b	Light intensity and production parameters of phytocenoses cultivated on soil-like substrate under controlled environment conditions.	Adv Space Res.	31 : 1775- 1780 PMID: 14503517
<b>2003</b>	Tikhomirov AA, Ushakova SA, Manukovsky NS, Lisovsky GM, Kudenko YA, Kovalev VS, Gribovskaya IV,	LSS /C4b	Synthesis of biomass and utilization of plants wastes in a physical model of biological life-support system.	Acta Astronautica	53 : 249- 257 PMID: 14649254

Tirrannen LS, Zolotukhin IG, Gros JB, Lasseur Ch.					
<b>2003</b>	Gros, J. B.; Poughon, L.; Lasseur, C.; Tikhomirov, A. A.	LSS	Recycling efficiencies of C, H, O, N, S, and P elements in a Biological Life Support System based on microorganisms and higher plants	Advances in Space Research	31 : 195-199
<b>2003</b>	Favier-Teodorescu, L.; Cornet, J. F.; Dussap, C. G.	Mo/C2	Modelling continuous culture of <i>Rhodospirillum rubrum</i> in photobioreactor under light limited conditions	Biotechnology Letters	25 : 359-364
<b>2003</b>	Cornet, J. F.; Favier, L.; Dussap, C. G.	Mo/C4a	Modeling stability of photoheterotrophic continuous cultures in photobioreactors	Biotechnology Progress	19 : 1216-1227
<b>2003</b>	Cogne, G.; Lehmann, B.; Dussap, C. G.; Gros, J. B.	C4a	Uptake of macrominerals and trace elements by the <i>cyanobacterium Spirulina platensis (Arthospira platensis PCC 8005)</i> under photoautotrophic conditions: culture medium optimization	Biotechnology and Bioengineering	81 : 588-593
<b>2003</b>	Horneck, G.; Facius, R.; Reichert, M.; Rettberg, P.; Seboldt, W.; Manzey, D.; Comet, B.; Maillet, A.; Preiss, H.; Schauer, L.; Dussap, C. G.; Poughon, L.; Belyavin, A.; Reitz, G.; Baumstark-Khan, C.; Gerzer, R.	LSS	HUMEX, a study on the survivability and adaptation of humans to long-duration exploratory missions, part I: lunar missions	Advances in Space Research	31 : 2389-2401
<b>2002</b>	Waters, G. C. R.; Olabi, A.; Hunter, J. B.; Dixon, M. A.; Lasseur, C.	C4b /LSS	Bioregenerative food system cost based on optimized menus for advanced life support	Life Support & Biosphere Science: International Journal of Earth Space	8 : 199-210
<b>2002</b>	Gòdia, F.; Albiol, J.; Montesinos, J. L.; Pérez, J.; Creus, N.; Cabello, F.;	LSS/MPP	MELISSA: a loop of interconnected bioreactors to develop life support in space	Journal of Biotechnology	99 : 319-330

	Mengual, X.; Montras, A.; Lasseur, C.					
<b>2001</b>	Erkman, S	LSS	Industrial ecology: a new perspective on the future of the industrial system	Swiss Med Wkly. Free article. Review	Sep 22; 131 (37-38): 531-8.	PMID: 11759173
<b>2001</b>	Morist, A.; Montesinos, J. L.; Cusidó, J. A.; Gòdia, F.	C4a	Recovery and treatment of <i>Spirulina platensis</i> cells cultured in a continuous photobioreactor to be used as food	Process Biochemistry	37 :	535-547
<b>2001</b>	Vernerey, A.; Albiol, J.; Lasseur, C.; Gòdia, F.	C4a	Scale-up and design of a pilot-plant photobioreactor for the continuous culture of <i>Spirulina platensis</i>	Biotechnology Progress	17 :	431-438
<b>2001</b>	Savage, C. J.; Tan, G. B.; Lasseur, C.	LSS	ESA developments in life support technology: achievements and future priorities	Acta Astronautica	49 :	331-344
<b>2001</b>	Poughon, L.; Dussap, C. G.; Gros, J. B.	Mo/C3	Energy model and metabolic flux analysis for autotrophic nitrifiers	Biotechnology and Bioengineering	72 :	416-433
<b>2000</b>	Paille, C.; Albiol, J.; Curwy, R.; Lasseur, C.; Godia, F.	LSS	FEMME: a precursor experiment for the evaluation of bioregenerative life support systems	Planetary and Space Science	48 :	515-521
<b>2000</b>	Cornet, J. F.; Albiol, J.	Mo/C2	Modeling photoheterotrophic growth kinetics of <i>Rhodospirillum rubrum</i> in rectangular photobioreactors	Biotechnology Progress	16 :	199-207
<b>1999</b>	Poughon, L.; Dussap, C. G.; Gros, J. B.	Mo	Dynamic model of a nitrifying fixed bed column: Simulation of the biomass distribution of <i>Nitrosomonas</i> and <i>Nitrobacter</i> and of transient behaviour of the column	Bioprocess Engineering	20 :	209-221
<b>1999</b>	Fulget, N.; Poughon, L.; Richalet, J.; Lasseur, C.	Mo/LSS	MELISSA: global control strategy of the artificial ecosystem by using first principles models of the compartments	Advances in Space Research	24 :	397-405
<b>1999</b>	Dixon MA, Grodzinski B, Cote R, Stasiak M.	C4b	Sealed environment chamber for canopy light interception and trace hydrocarbon analyses	Advances in Space Research	24 :	271-280

<b>1999</b>	Paille C, Curwy R, Filali R, Lehman B, Dubertret G, Foing B, Lasseur C.	LSS	FEMME: A precursor ecosystem on the Moon	Advances in Space Research	23:	1857-1860
<b>1998</b>	Stasiak MA, Cote R, Dixon M, Grodzinski B	C4b	Increasing plant productivity in closed environments with inner canopy illumination	Life Support & Biosphere Science:	5 :	175-181
<b>1997</b>	Filali R, Lasseur C, Dubertret, G.	C4a	MELiSSA: nitrogen sources for growth of the cyanobacterium <i>Spirulina</i>	Proc. Sixth European Symp. on Space Environmental Control Systems, Noordwijk, The Netherlands	909–912	
<b>1997</b>	Cornet, J. F.; Marty, A.; Gros, J. B.	C4a	Revised Technique for the Determination of Mean Incident Light Fluxes on Photobioreactors	Biotechnology Progress	13 :	408-415
<b>1996</b>	Lasseur, C.; Verstraete, W.; Gros, J. B.; Dubertret, G.; Rogalla, F.	LSS	MELiSSA: a potential experiment for a precursor mission to the Moon	Advances in Space Research	18 :	111-117
<b>1995</b>	Marty, A.; Cornet, J. F.; Djelveh, G.; Larroche, C.; Gros, J. B.	C2/C3/C4a	A gas phase chromatography method for determination of low dissolved CO <sub>2</sub> concentration and/or CO <sub>2</sub> solubility in microbial culture media	Biotechnology Techniques	9 :	787-792
<b>1995</b>	Cornet, J. F.; Dussap, C. G.; Gros, J. B.; Binois, C.; Lasseur, C.	Mo/C4a	A simplified monodimensional approach for modeling coupling between radiant light transfer and growth kinetics in photobioreactors	Chemical Engineering Science	50 :	1489-1500
<b>1994</b>	Kersters, I.; Maestrojuan, G. M.; Torck, U.; Vancanneyt, M.; Kersters, K.; Verstraete, W.	C1	Isolation of <i>Coprototermobacter proteolyticus</i> from an Anaerobic Digest and Further Characterization of the Species	Systematic and Applied Microbiology	17 :	289-295
<b>1994</b>	Tranquille, N.; Emeis, J. J.; de Chambure, D.; Binot, R.; Tamponnet, C.	C4a/C5	Spirulina acceptability trials in rats. A study for the "MELiSSA" life-support system	Advances in Space Research	14 :	167-170

<b>1994</b>	Cornet, J. F.; Dussap, C. G.; Gros, J. B.	C4a	Conversion of radiant light energy in photobioreactors	AIChE Journal	40 :	1055-1066
<b>1994</b>	Binot, R. A.; Tamponnet, C.; Lasseur, C.	LSS	Biological life support for manned missions by ESA	Advances in Space Research	14 :	71-74
<b>1993</b>	Kersters, I.; Houwen, F.; Verstraete, W.	C1	Thermophilic, anaerobic degradation of gelatin by <i>Thermobacteroides proteolyticus</i>	Biotechnology Letters	15 :	931-936
<b>1993</b>	Filali R, Cornet J-F, Fontane T, Fournet B, Dubertret, G.	C4a	Production, isolation and preliminary characterization of the exopolysaccharide of the cyanobacterium <i>Spirulina platensis</i>	Biotechnology Letters	15 :	567-572
<b>1992</b>	Cornet, J. F.; Dussap, C. G.; Cluzel, P.; Dubertret, G.	C4a Mo	A structured model for simulation of cultures of the cyanobacterium <i>Spirulina platensis</i> in photobioreactors: II. Identification of kinetic parameters under light and mineral limitations	Biotechnology and Bioengineering	7 :	826-834
<b>1992</b>	Cornet, J. F.; Dussap, C. G.; Dubertret, G.	C4a	A structured model for simulation of cultures of the cyanobacterium <i>Spirulina platensis</i> in photobioreactors: I. Coupling between light transfer and growth kinetics	Biotechnology and Bioengineering	7:	817-825
<b>1989</b>	Lasseur Ch, D. Massimino, Renou JL, Richaud Ch.,	LSS	The C23A system. First step for a monitoring system of CELSS in flight.	Advances in Space Research	9 :	741-746
<b>1988</b>	Lasseur Ch., Chipaux C. André M. Cote FX, J. Massimino,	LSS	Possible use of a gas monitoring system in space respirometry studies.	Space thermal control and life support systems. Oct.88 ESA.		69-72
<b>1988</b>	Mergeay M., Verstraete W., Dubertret G., Lefort-Tran M., Chipaux C. Binot R.	LSS	MELISSA - a microorganisms based model for CELSS development	Proceedings 3rd Symposium on Space Thermal Control & Life Support Systems Noordwijk (NL)	288 :	65-68

1987	DUBERTRET G., LEFORT-TRAN M., CHIPAUX C.	SP/LSS The Chinese flight experiment	Ecological algal system in microgravity conditions – Preliminary results	3 <sup>rd</sup> European Symposium on Life Sciences Research in Space (ESA SP271) Graz (Austria)
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**Legend of paper (or book-chapters) topics & MELiSSA compartments:**

**LSS : Life Support Systems**

**SP: Space flight experiments and related studies (biocontamination, confined and extreme environments, space simulations (radiation, microgravity, low shear))**

**Mo: Modelling**

**C1: MELiSSA first compartment (thermophilic, anaerobic, waste degradation)**

**C2: MELiSSA second compartment (anaerobic photosynthetic)**

**C3: MELiSSA third compartment (nitrifying)**

**C4a : MELiSSA fourth compartment (microbial food production (as among others: cyanobacteria: *Limnospira indica***

**PCC8005 /*Arthrosphaera* sp.PCC8005)** (The taxonomic discussion is still ongoing (August 2019): making use of pangenomic taxonomy signatures for a large set of publicly available cyanobacterial genomes, strain PCC 8005 was allocated as the type strain to a new species named *Arthrosphaera nitrilium* (Walter et al, 2017), opening up a fresh discourse on *Arthrosphaera* taxonomy. Recently, mass produced Arthrosphaera have been placed into a new genus, *Limnospira*, mainly based on 16S rRNA phylogenetic analysis but also taking into account morphological and ecological data (Nowicka-Krawczyk et al., 2019), further fueling the complex debate among cyanobacterial taxonomists on the true and final position of the *Arthrosphaera* genus and its current member species).

**C4b: MELiSSA fourth compartment (plant food production)**

**C5: Consumers compartment**

**MPP: MELiSSA Pilot Plant**

