**Gabriella A.M. ten Have**

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# **Biography**

In 2012, Gabriella ten Have started as a senior research associate position at the Center for Translational Research in Aging & Longevity in the Department of Health and Kinesiology, Texas A&M University (TAMU), College Station, TX. The line of her research will provide translational data necessary to improve dietary strategies for critically ill patients, by unraveling and restoring the metabolic disturbances in critically ill translational animal models.

Her peer-reviewed publications (14 between 2007-2017) and expertise resulted in her doctoral dissertation on September 13th, 2017 (Maastricht University, The Netherlands), From 2017 until now (13th of March 2023), she published 20 more manuscripts, 3 as the first author and with an average impact factor of 7.2. 60% of her citations are accomplished in the last 5 years indicating its impact (Total peer-reviewed publications: 48; Google Scholar Citations: 1609; h-index: 20, i10-index: 30). The promotion to research assistant professor in 2018 allowed her to apply for grants to support her research. Until now $1,979,933,- was awarded as PI or Co-PI. E.g. federal: NIH, DOD $1,797,362,-; (inter) national foundations ESPEN fellowship grants $57,792,- and recently she obtained the ASPEN Rhoads Research Foundation grant $50,000,-.

# **Degrees**

| Sept 2017 | *PhD* – Preclinical nutrition. University of Maastricht, The Netherlands. Thesis: “Pig interorgan balance studies in health and disease” |
| --- | --- |
| June 1986 | *BSc* – Biology/Life Science. Dr. Ir. W.L. Ghijsen Institute, Utrecht, The Netherlands. |
| Year | Degree, Area, University, City, State, Country |

# **Texas A&M - Rank and Promotion History**

| **Effective Date of Rank** | **End Date of Rank** | **Faculty Title** | **Tenure Classification** | **Department** | **College** |
| --- | --- | --- | --- | --- | --- |
| 9/1/2018 |  | Research assistant professor | non-Tenured | HLKN | SEHD |
|  |  |  |  |  |  |

# **Career Work Experience**

| 2018 – present | *Research Assistant Professor,* Center for Translational Research in Aging & Longevity (CTRAL), Center for Translational Research on Aging & Longevity. Dept. Health and Kinesiology, Texas A&M University, College Station, TX |
| --- | --- |
| 2020 - present | *Co-director Pharmaceutical compounding*, Center for Translational Research in Aging & Longevity (CTRAL), Center for Translational Research on Aging & Longevity. Dept. Health and Kinesiology, Texas A&M University, College Station, TX |

# 2012-present *Director Animal Research, Co-director Analytical Laboratory*, Center for Translational Research in Aging & Longevity (CTRAL), Center for Translational Research on Aging & Longevity. Dept. Health and Kinesiology, Texas A&M University, College Station, TX

# 2012 – 2017 *Senior research associate* Center for Translational Research in Aging & Longevity (CTRAL), Center for Translational Research on Aging & Longevity. Dept. Health and Kinesiology, Texas A&M University, College Station, TX

# 2007 – 2012 *Research Associate*, Center for Translational Research on Aging & Longevity. Donald W. Reynolds Institute on Aging. University of Arkansas for Medical Sciences, Little Rock, AR

# 2003 – 2007 *Senior Instructor*, Metabolic Research Centre (MRC) of Dr. N.E.P. Deutz of the Department of Surgery, Faculty of Medicine, University Maastricht, the Netherlands

# 1990 – 2003 *Research assistant,* Metabolic Research Centre (MRC) of Dr. N.E.P. Deutz of the Department of Surgery, Faculty of Medicine, University Maastricht, the Netherlands

# 1987 – 1990 *Research assistant,* Department of Pharmacology, Faculty of Pharmacy, University of Utrecht. the Netherlands

# 1986 – 1987 *Research assistant,* Department of Molecular Biology, NKI (Dutch Cancer Institute) in Amsterdam. the Netherlands

# **Texas A&M - Administrative Appointments**

| **Start Date of Appointment** | **End Date of Appointment** | **Position Title** | **Department, Unit** | **Roles and-or Responsibilities** |
| --- | --- | --- | --- | --- |
| 2023 |  | PhD Graduate committee, Amelia L Christian |  | Commitee Member |
| 2023 | 2025 | PhD graduate, Savannah Knezek |  | Mentor for Academy of Future Faculty (AFF) Certificate through the Center for Teaching Excellence (CTE) |
| 2022 |  | PhD Graduate committee, Sofie de Wandel |  | Committee Member |
| 2021 |  | PhD Graduate committee, Raven Wierzchowska-McNew |  | Committee Member |
| 2020 |  | PhD Graduate committee,Amanda B. Blake |  | Committee Member |
| 2020 |  | Master graduation committee, Ryan Morse |  | Committee Member |
| 2017- present |  | Biosafety, chemical and clinical safety |  | CTRAL Safety officer |
| 2017 - present |  | Pharmaceutical regulatory affairs for the use of unique stable isotopes in human and animal research studies at CTRAL |  | Coordinator/Manager |

# **Awards and Honors**

| **Year Conferred** | **Award and Honor Title** | **Conferring Organization** | **Award Classification** | **Award and Honor Level** | **Detailed Description of Award** |
| --- | --- | --- | --- | --- | --- |
| 2023 | American Society for Nutrition (ASN) | 2023 Vernon Young International Award for Amino Acid Research |  |  | $500,- |
| 2023 | ASPEN Rhoads Research Foundation Annual Grant. | American Society for Parenteral and Enteral Nutrition |  |  | $25.000,- |
| 2021 | ASPEN Rhoads Research Foundation Annual Grant. | American Society for Parenteral and Enteral Nutrition |  |  | $25.000,- |
| 2012 | ESPEN Research Fellowship Grant 2012 | American Society for Parenteral and Enteral Nutrition |  |  | **$33,982.-** |

# **Teaching**

| **Course Title** | **Course** | **Credit Hours** | **Instruction Mode** | **Student Credit Hours** | **Enrollment** | **If co-taught, % contributed to course** | **Semester** | **Multidisciplinary Collaboration Activities Included** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Biostatistics | KINE 690 600 |  |  |  |  | 100% | Spring 2023 |  |
| Special Topics: Methods in Human Clinical Research | KINE 689 |  |  |  |  | Guest instructor | Fall 2017- present |  |
| Biostatistics | KINE 690 600 |  |  |  |  | Guest instructor | Fall 2019-Fal2022 |  |

# **Additional Teaching Activities**

| **Title** | **Audience** | **Location Instruction Delivered** | **Sponsoring Organization** | **Number of Participants** | **Start Date** | **End Date** | **Method of Delivery** | **Other Teaching Role** | **Student Collaborators** | **Teaching Innovation and Curriculum Development Type** | **Teaching Level** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CTMM 2023 ESPEN (European Society for Clinical Nutrition and Metabolism) Intensive Course in Tracer Methodology in Metabolism | International researchers |  |  |  |  | 2023 |  |  |  |  |  |
| CTMM 2017 ESPEN (European Society for Clinical Nutrition and Metabolism) Intensive Course in Tracer Methodology in Metabolism | International researchers | College Station | European Society of Clinical Nutrition and Metabolism |  |  | 2017 |  |  |  |  |  |
| CTRAL (Center for Translational Research on Aging & Longevity) Seminar: Pig interorgan metabolic balance studies in sepsis |  |  |  |  |  | 2017 |  |  |  |  |  |
| CTRAL (Center for Translational Research on Aging & longevity) Seminar: Severely Compromised Anabolic Response to Nutrition in a Pseudomonas aeroginosa (PM) Induced Hyperdynamic Sepsis-Recovery Pig Model |  |  |  |  |  | 2016 |  |  |  |  |  |
| On-Site Human Clinical Research Facility Safety Course (HCRF) |  |  |  |  | 2017 | 2020 |  |  |  |  |  |

# **Graduate Advising**

# Member

| PhD graduate committee, committee member: Amelia L. Christian | 2023 |
| --- | --- |
| PhD Graduate committee, committee member: Sofie de Wandel | 2022 |
| PhD Graduate committee, committee member: Raven Wierzchowska-McNew | 2021 |
| PhD Graduate committee, committee member: Amanda B. Blake | 2020 |
| Master graduation committee, committee member: Ryan Morse | 2020 |

# **Professional Students/Interns/Residencies Advising**

| 2012 - present  2007-2012  2003-2007 | *Texas A&M University: Visiting Scholars*: Merel Hommen (PhD student), Ward van den Berg (BSc student), Marieke Schooneman (PhD student), Santoesha Nanhoe (BSc student), Pricilla Moerland (BSc student), Lisa Jansen (BSc student), Heleen van der Spek (BSc student), Estell Peach (BSc student), Celine van Sas (BSc student). Carolina Perez (BSc student), Jord van der Bilt (BSc student), Martin Hagve (Post-Doc)  *Student workers:* Surabhi Patekar, Hooriya Sulaiman, Karat Sidhu, Elizabeth Karhour, Michael Terry, Christian Seua, Catherina Wellman, Bryan Calk, Aayudh Das, Jeanese Calderon, Yash Daasari, Haley Russell, Eliza George, Alice Palmere, Daman Saini, Joy Wang, Jiyeon Cha, Robert Beach, Catherine Poates, Bailey Blair, Lily Mahmoud, Caitlyn Matejka, Shashank Kovuru, Sahil Sarvadeva, Madeline Rodenbaugh, Emelie Nelson, Roxana Rodriguez, Saumia Thomas, Mary O'Donnell, Christian Seua, Whitney Mantooth  *University of Arkansas Medical School: Visiting Scholars*: Jolien Veneman (MSc student), Anna Pasto (MSc student), Renske Deutz (MSc student)  *Maastricht University, The Netherlands: Visiting Scholar:* Valeria Braulio (M.D.) |
| --- | --- |

# **Faculty Mentoring (nonstudents)**

| 2012 – present  2007-2012  2003 - 2007 |  | Center for Translational Research on Aging & Longevity (CTRAL), Texas A&M University, TX, USA. *Research Staff*: Ryan Morse, Macie Mackey, Sunday Simbo, Neelam Charolia, Danielle White, Cristina Osorio, Carolina Perez *Post-doc researcher*: Sarah Rice, Sunday Simbo  University of Arkansas Medical School. AR, USA. *Research Staff*: Ruud Ramakers. *Post-doc researcher*: Bea Zoer.  Maastricht University, The Netherlands.Research Staff: Ruud Ramakers, Ayhan Sik. PhD students: Maaike Bruins, Marcella Hallemeesch, Yvonne Vissers, Pieter van der Pijl. Visiting Scholar: Valeria Braulio |
| --- | --- | --- |

# **Publications, Conference Proceedings, Patents and Creative Products/Innovations**

# (\*) = mentored undergraduate, graduate or post-doc)

## Journal article (peer review)

### Completed/Published

Kirschner S.K.**\***, Ghane P., Park J.K.,Simbo S.Y.**\***, Ivanov I., Braga-Neto U.M., **Ten Have G.A.M**., Thaden J.J., Engelen M.P.K.J., Deutz N.E.P. . Novel Stable Tracer Pulse Approach to Estimate Short-Chain Fatty Acid Production in Accessible and Inaccessible Body Pools in Health and Disease. Metabolism. [doi.org/10.1016/j.metabol.2023.155399](https://doi.org/10.1016/j.metabol.2023.155399) (accepted 13 Jan, in press) (**IF 13.934**))

Nicolaas E.P. Deutz, Pierre Singer, Raven A. Wierzchowska-McNew**\***, Marina V. Viana, Itai A. Ben-David, Olivier Pantet, John J. Thaden, **Gabriella A.M. Ten Have**, Mariëlle P.K.J. Engelen, and Mette M Berger. A comprehensive metabolic amino acid flux analysis of sex differences in critically ill patients. Metabolism. (accepted 12 Jan 2023)(**IF 13.934**)

Wierzchowska-McNew RA**\***, Engelen M, Thaden JJ, **Ten Have GA**, Deutz NEP. Obesity- and Sex-related Metabolism of Arginine and Nitric Oxide in Adults. Am J Clin Nutr 2022. doi: 10.1093/ajcn/nqac277. PubMed PMID: 36166849. **(5y IF 2021: 9.114)**

**Ten Have GAM**, Engelen M, Deutz NEP. In-vivo production of branched-chain amino acids, branched-chain keto acids, and beta-hydroxy beta-methylbutyric acid. Curr Opin Clin Nutr Metab Care. 2022;25(1):43-9. Epub 2021/11/20. doi: 10.1097/MCO.0000000000000800. PubMed PMID: 34798641. **(5y IF 2021: 5.042)**

Kirschner SK**\***, **Ten Have GAM**, Engelen M, Deutz NEP. Transorgan Short-Chain Fatty Acid Fluxes in the Fasted and Postprandial State in the Pig. American journal of physiology Endocrinology and metabolism. 2021. Epub 2021/10/05. https://doi.org/10.1152/ajpendo.00121.2021. doi: 10.1152/ajpendo.00121.2021. PubMed PMID: 34605248. **(5y IF 2021: 5.375)**

Viana MV, Becce F, Pantet O, Schmidt S, Bagnoud G, Thaden JJ, **Ten Have GAM**, Engelen M, Voidey A, Deutz NEP, Berger MM. Impact of β−hydroxy-β−methylbutyrate (HMB) on muscle loss and protein metabolism in critically ill patients: A RCT. Clinical Nutrition. 2021;40(8):4878-87. doi:10.1016/j.clnu.2021.07.018. PubMed PMID: 34358832. **(5y IF 2021: 8.23)**

Deutz NEP, Singer P, Wierzchowska-McNew RA**\***, Viana MV, Ben-David IA, Pantet O, Thaden JJ, **Ten Have GAM**, Engelen M, Berger MM. Comprehensive metabolic amino acid flux analysis in critically ill patients. Clinical nutrition (Edinburgh, Scotland). 2021;40(5):2876-97. Epub 2021/05/05. https://doi.org/10.1016/j.clnu.2021.03.015. doi: 10.1016/j.clnu.2021.03.015. PubMed PMID: 33946038. **(5y IF 2021: 8.23)**

Cross KM, Granados JZ**\*, Ten Have GAM**, Thaden JJ, Engelen M, Lightfoot JT, Deutz NEP. Correction: Protein fractional synthesis rates within tissues of high- and low-active mice. PLoS One. 2021 Feb 25;16(2):e0248081. doi: 10.1371/journal.pone.0248081. eCollection 2021. PubMed PMID: 33630961. **(5y IF 2021: 4.069)**

**Ten Have GAM**, Jansen L**\***, Schooneman MG**\***, Engelen M, Deutz NEP. Metabolic flux analysis of branched-chain amino and keto acids (BCAA, BCKA) and beta-hydroxy beta-methylbutyric acid across multiple organs in the pig. American journal of physiology Endocrinology and metabolism. 2021;320(3):E629-E40. Epub 2021/02/02. https://doi.org/10.1152/ajpendo.00384.2020. doi: 10.1152/ajpendo.00384.2020. PubMed PMID: 33522397. **(5y IF 2021: 5.375)**

Rice SA**\***, **Ten Have GAM**, Reisz JA, Gehrke S, Stefanoni D, Frare C, Barati Z, Coker RH, D'Alessandro A, Deutz NEP, Drew KL. Nitrogen recycling buffers against ammonia toxicity from skeletal muscle breakdown in hibernating arctic ground squirrels. Nat Metab. 2020. Epub 2020/12/09. doi: 10.1038/s42255-020-00312-4. PubMed PMID: 33288952. **(5y IF 2020: 13.511)**

Cross KM, Granados JZ**\***, **Ten Have GAM**, Thaden JJ, Engelen M, Lightfoot JT, Deutz NEP. Protein fractional synthesis rates within tissues of high- and low-active mice. PLoS One. 2020;15(11):e0242926. Epub 2020/12/01. doi: 10.1371/journal.pone.0242926. PubMed PMID: 33253250; PMCID: PMC7703944. **(5y IF 2020: 3.788)**

Ligthart-Melis GC, Engelen M, Simbo SY**\***, **Ten Have GAM**, Thaden JJ, Cynober L, Deutz NEP. Metabolic Consequences of Supplemented Methionine in a Clinical Context. The Journal of Nutrition. 2020;150(Supplement\_1):2538S-47S. doi: 10.1093/jn/nxaa254. PubMed PMID: 33000166. **(5y IF 2020: 5.721)**

Granados JZ**\***, **Ten Have GAM**, Letsinger AC, Thaden JJ, Engelen M, Lightfoot JT, Deutz NEP. Activated whole-body arginine pathway in high-active mice. PLoS One. 2020;15(6):e0235095. doi: 10.1371/journal.pone.0235095. PubMed PMID: 32589680. **(5y IF 2020: 3.788)**

Mercer KE, **Ten Have GAM**, Pack L, Lan R, Deutz NEP, Adams SH, Piccolo BD. Net release and uptake of xenometabolites across intestinal, hepatic, muscle, and renal tissue beds in healthy conscious pigs. American journal of physiology. 2020;319(2):G133-G41. Epub 2020/06/17. doi: 10.1152/ajpgi.00153.2020. PubMed PMID: 32538141. **(5y IF 2019: 7.725)**

Engelen M, Jonker R**\***, Thaden JJ, **Ten Have GAM**, Jeon MS, Dasarathy S, Deutz NEP. Comprehensive metabolic flux analysis to explain skeletal muscle weakness in COPD. Clin Nutr. 2020;39(10):3056-65. Epub 2020/02/10. doi: 10.1016/j.clnu.2020.01.010. PubMed PMID: 32035752; PMCID: PMC7387164. **(5y IF 2020: 7.94)**

Ilaiwy A, **Ten Have GAM**, Bain JR, Muehlbauer MJ, O'Neal SK, Berthiaume JM, Parry TL, Deutz NEP, Willis MS. Identification of Metabolic Changes in Ileum, Jejunum, Skeletal Muscle, Liver, and Lung in a Continuous I.V. Pseudomonas aeruginosa Model of Sepsis Using Nontargeted Metabolomics Analysis. Am J Pathol. 2019;189(9):1797-813. Epub 2019/08/24. doi: 10.1016/j.ajpath.2019.05.021. PubMed PMID: 31439155; PMCID: PMC6723233. **(5y IF 2019: 4.227)**

Engelen M, **Ten Have GAM**, Thaden JJ, Deutz NEP. New advances in stable tracer methods to assess whole-body protein and amino acid metabolism. Curr Opin Clin Nutr Metab Care. 2019;22(5):337-46. Epub 2019/06/14. doi: 10.1097/MCO.0000000000000583. PubMed PMID: 31192825. **(5y IF 2019: 4.625)**

**Ten Have GAM**, Engelen M, Wolfe RR, Deutz NEP. Inhibition of jejunal protein synthesis and breakdown in Pseudomonas aeruginosa-induced sepsis pig model. American journal of physiology. 2019;316(6):G755-G62. Epub 2019/04/13. doi: 10.1152/ajpgi.00407.2018. PubMed PMID: 30978112; PMCID: PMC6620581. **(5y IF 2019: 7.725)**

Kaur A, **Ten Have GAM**, Hritzo B, Deutz NEP, Olsen C, Moroni M. Morphological and functional impairment in the gut in a partial body irradiation minipig model of GI-ARS. International journal of radiation biology. 2020;96(1):112-28. Epub 2018/11/27. doi: 10.1080/09553002.2018.1552377. PubMed PMID: 30475652. **(5y IF 2020: 2.63)**

Deutz NEP, Thaden JJ, **Ten Have GAM**, Walker DK, Engelen M. Metabolic phenotyping using kinetic measurements in young and older healthy adults. Metabolism: clinical and experimental. 2018;78:167-78. Epub 2017/10/08. doi: 10.1016/j.metabol.2017.09.015. PubMed PMID: 28986165; PMCID: PMC5732887. **(5y IF 2021: 10.859)**

**Ten Have GAM**, Deutz RCI, Engelen M, Wolfe RR, Deutz NEP. Characteristics of a Pseudomonas aeruginosa induced porcine sepsis model for multi-organ metabolic flux measurements. Lab Anim. 2017:23677217718003. doi: 10.1177/0023677217718003. PubMed PMID: 28679339. **(5y IF 2022: 2.440)**

Eggink HM, van Nierop FS, Schooneman MG**\***, Boelen A, Kalsbeek A, Koehorst M, **Ten Have GAM**, de Brauw LM, Groen AK, Romijn JA, Deutz NEP, Soeters MR. Transhepatic bile acid kinetics in pigs and humans. Clin Nutr. 2018;37(4):1406-14. Epub 2017/07/04. doi: 10.1016/j.clnu.2017.06.015. PubMed PMID: 28669667. **(5y IF 2018: 5.981)**

**Ten Have GAM**, Engelen M, Wolfe RR, Deutz NEP. Phenylalanine isotope pulse method to measure effect of sepsis on protein breakdown and membrane transport in the pig. American journal of physiology. 2017;312(6):E519-E29. doi: 10.1152/ajpendo.00351.2016. PubMed PMID: 28292760; PMCID: PMC5494580. **(5y IF 2019: 7.725)**

Kumar A, Davuluri G, Silva RNE, Engelen M, **Ten Have GAM**, Prayson R, Deutz NEP, Dasarathy S. Ammonia lowering reverses sarcopenia of cirrhosis by restoring skeletal muscle proteostasis. Hepatology (Baltimore, Md. 2017;65(6):2045-58. doi: 10.1002/hep.29107. PubMed PMID: 28195332; PMCID: PMC5444955. **(IF 2021: 17.298)**

Bosoi CR, Oliveira MM, Ochoa-Sanchez R, Tremblay M, **Ten Have GA**, Deutz NE, Rose CF, Bemeur C. The bile duct ligated rat: A relevant model to study muscle mass loss in cirrhosis. Metab Brain Dis. 2017 Apr;32(2):513-518. doi: 10.1007/s11011-016-9937-4. Epub 2016 Dec 15. (**5y IF 2021: 3.485**)

**Ten Have GA**, van der Pijl PC**\***, Kies AK, Deutz NEP. Enhanced Lacto-Tri-Peptide Bio-Availability by Co-Ingestion of Macronutrients. PLoS One. 2015;10(6):e0130638. doi: 10.1371/journal.pone.0130638. PubMed PMID: 26098114; PMCID: PMC4476664. **(5y IF 2015: 3.535)**

Schooneman MG**\***, **Ten Have GA**, van Vlies N, Houten SM, Deutz NEP, Soeters MR. Transorgan fluxes in a porcine model reveal a central role for liver in acylcarnitine metabolism. American journal of physiology. 2015;309(3):E256-64. doi: 10.1152/ajpendo.00503.2014. PubMed PMID: 26037250. **(5y IF 2019: 7.725)**

Tsien C, Davuluri G, Singh D, Allawy A, **Ten Have GA**, Thapaliya S, Schulze JM, Barnes D, McCullough AJ, Engelen MP, Deutz NEp, Dasarathy S. Metabolic and molecular responses to leucine-enriched branched chain amino acid supplementation in the skeletal muscle of alcoholic cirrhosis.Hepatology. 2015 Jun;61(6):2018-29. doi: 10.1002/hep.27717. PubMed PMID: 25613922. Epub 2015 Feb 27. **(IF 2021: 17.298)**

Luiking YC, **Ten Have GA**, Wolfe RR, Deutz NEP. Arginine de novo and nitric oxide production in disease states. Am J Physiol Endocrinol Metab. 2012;303(10):E1177-89. Epub 2012/09/27. doi: 10.1152/ajpendo.00284.2012. PubMed PMID: 23011059. **(5y IF 2012: 4.828)**

Sharma V, **Ten Have GA**, Ytrebo L, Sen S, Rose CF, Dalton RN, et al. Nitric oxide and L-arginine metabolism in a devascularized porcine model of acute liver failure. Am J Physiol Gastrointest Liver Physiol. 2012;303(3):G435-41. Epub 2012/03/17. doi: 10.1152/ajpgi.00268.2011. PubMed PMID: 22421619. **(5y IF 2012: 3.622)**

**Ten Have GA**, Engelen MP, Soeters PB, Deutz NEP. Absence of post-prandial gut anabolism after intake of a low quality protein meal. Clin Nutr. 2012;31(2):273-82. Epub 2011/10/18. doi: 10.1016/j.clnu.2011.09.008. PubMed PMID: 22001026. (5y IF 2012:3.877) **(5y IF 2012: 3.877)**

Graf BA, van Platerink CJ, **Ten Have GAM**, Deutz NEP, Velikov KP, Flendrig LM, et al. Absolute bioavailability of a Hoodia gordonii steroid glycoside from different physicochemical formats in the pig. Journal of Functional Foods. 2011;3(3):135-43. doi: 10.1016/j.jff.2011.03.006. **(5y IF 2021: 5.223)**

He Y, Hakvoort TBM, Kohler SE, Vermeulen JLM, de Waart DR, de Theije C, **ten Have GAM**, van Eijk HMH, Kunne C, Labruyere WT, Houten SM, Sokolovic M, Ruijter JM, [Deutz NE](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Deutz%20NE%22%5BAuthor%5D), Lamers WH. Glutamine Synthetase in Muscle Is Required for Glutamine Production during Fasting and Extrahepatic Ammonia Detoxification. Journal of Biological Chemistry 285(13) 2010; 9516-24. doi: 10.1074/jbc.M109.092429. Epub 2010 Jan 11. PubMed PMID: 20064933. PMCID: PMC2843202 (**IF 2021: 5.486)**

van der Pijl PC**\***, Kies AK, **Ten Have GA**, Duchateau GS, Deutz NEP. Pharmacokinetics of proline-rich tripeptides in the pig. Peptides 2008;29:2196-202. doi: 10.1016/j.peptides.2008.08.011. Epub 2008 Aug 23. PubMed PMID: 18789987. **(IF 2022: 3.867)**

**Ten Have GA**, Engelen MP, Luiking YC, Deutz NEP. Absorption kinetics of amino acids, peptides, and intact proteins. Int J Sport Nutr Exerc Metab. 2007 Aug;17 Suppl:S23-36. Review. doi: 10.1123/ijsnem.17.s1.s23. PubMed PMID: 18577772. **(IF 2020: 4.599)**

Meesters RJ, van Eijk HM, **ten Have GA**, de Graaf AA, Venema K, van Rossum BE, Deutz NE. Application of liquid chromatography-mass spectrometry to measure the concentrations and study the synthesis of short chain fatty acids following stable isotope infusions. J Chromatogr B Analyt Technol Biomed Life Sci. 2007 Jul 1;854(1-2):57-62. Epub 2007 Apr 8. doi: 10.1016/j.jchromb.2007.03.044. PubMed PMID: 17452031. **(5y IF 2021: 3.042)**

Ytrebø LM, Sen S, Rose C, Davies NA, Nedredal GI, Fuskevaag OM, **Ten Have GA**, Prinzen FW, Williams R, Deutz NE, Jalan R, Revhaug A. Systemic and regional hemodynamics in pigs with acute liver failure and the effect of albumin dialysis. Scand J Gastroenterol 2006 Vol. 41 Issue 11 Pages 1350-60. doi: 10.1080/00365520600714527. PubMed PMID: 17060130. **(5y IF 2021: 2.912)**

Ytrebø LM, Sen S, Rose C, **Ten Have GA**, Davies NA, Hodges S, Nedredal GI, Romero-Gomez M, Williams R, Revhaug A, Jalan R, Deutz NE. Interorgan ammonia, glutamate, and glutamine trafficking in pigs with acute liver failure. Am J Physiol Gastrointest Liver Physiol. 2006 Sep;291(3):G373-81. Epub 2006 Jun 15. doi: 10.1152/ajpgi.00440.2005. PubMed PMID: 16782695. **(IF 2006: 3.681)**

Boelens PG, Melis GC, van Leeuwen PA, **ten Have GA**, Deutz NE. Route of administration (enteral or parenteral) affects the contribution of L-glutamine to de novo L-arginine synthesis in mice: a stable-isotope study. Am J Physiol Endocrinol Metab 2006;291:E683-90. doi: 10.1152/ajpendo.00252.2005. Epub 2006 May 9. PubMed PMID: 16684848. **(IF 2006: 4.123)**

Braulio VB**\***, **Ten Have GA**, Vissers YL**\***, Deutz NE. Time course of nitric oxide production after endotoxin challenge in mice. Am J Physiol Endocrinol Metab 2004;287:E912-8. doi: 10.1152/ajpendo.00540.2003. Epub 2004 Jul 20. PubMed PMID: 15265764. **(IF 2004: 4.431)**

Hallemeesch MM**\***, **Ten Have GA**, Deutz NE. Metabolic flux measurements across portal drained viscera, liver, kidney and hindquarter in mice. Lab Anim 2001;35:101-10. doi: 10.1258/0023677011911426. PubMed PMID: 11201286. **(5y IF 2022: 2.440)**

**Ten Have GA**, Bost MC, Suyk-Wierts JC, van den Bogaard AE, Deutz NE. Simultaneous measurement of metabolic flux in portally-drained viscera, liver, spleen, kidney and hindquarter in the conscious pig. Lab Anim. 1996 Oct;30(4):347-58. doi: 10.1258/002367796780739862. PubMed PMID: 8938622. **(5y IF 2022: 2.440)**

Deutz NE, **Ten Have GA**, Soeters PB, Moughan PJ. Increased intestinal amino-acid retention from the addition of carbohydrates to a meal. Clin Nutr 1995;14:354-64. doi: 10.1016/s0261-5614(95)80053-0. PubMed PMID: 16843957. **(IF 1997: 1.041)**

van Heuven-Nolsen D, **Ten Have GA**, Nijkamp FP. Interaction between neutrophils and pig coronary artery increases histamine contractions. Agents Actions. 1990 Apr;30(1-2):195-7. doi: 10.1007/BF01969036. PubMed PMID: 2371922. **(IF:0.9)**

van Heuven-Nolsen D, **Ten Have GA**, Nijkamp FP. Neutrophils increase histamine contractions in pig coronary artery: a role for lipoxygenase products. Br J Clin Pharmacol. 1990;30 Suppl 1:156S-158S. doi: 10.1111/j.1365-2125.1990.tb05492.x. PubMed PMID: 2125232. **(5y IF 2021: 4.282)**

van Heuven-Nolsen D, **Ten Have GA**, Nijkamp FP. Increased reactivity to histamine in the coronary vascular system of the guinea-pig after endotoxin. Agents Actions. 1989 Apr;27(1-2):158-9.doi: 10.1007/BF02222226. PubMed PMID: 2750587. **(IF: 0.8)**

Van Oosterhout AJ, Folkerts G, **Ten Have GA**, Nijkamp. Involvement of the spleen in the endotoxin-induced deterioration of the respiratory airway and lymphocyte beta-adrenergic systems of the guinea pig. FP. Eur J Pharmacol. 1988 Mar 15;147(3):421-9. doi: 10.1016/0014-2999(88)90177-x. PubMed PMID: 2837397. **(5y IF 2021: 5.195)**

Van Oosterhout AJ, **Ten Have GA**, Nijkamp FP. Endotoxin-induced reduction of beta-adrenoceptor number in guinea pig splenic lymphocyte membranes. Agents Actions. 1986 Dec;19(5-6):361-2. doi: 10.1007/BF01971255. PubMed PMID: 3030078. (IF: 0.9)

## Book

### Completed/Published

**GA ten Have,** Pig interorgan balance studies in health and disease. Pages 1-301, ISBN 978-1-38-980608-7, Maastricht University 2017

## Conference Proceedings

### Completed/Published

Presentations at (inter) national conferences and symposia. (poster/oral. (\*) = mentored undergraduate, graduate or post-doc)

1. **Ten Have G.A.M.**, Thaden J.J., Engelen M.P.K.J., Deutz N.E.P. Muscle, jejunum and lung fractional protein synthesis are prominently correlated with whole body protein synthesis in the pig. 2022 European Society for Parenteral and Enteral Nutrition. published: Clinical Nutrition ESPEN, vol 54, page 469, 10.1016/j.clnesp.2022.09.044 **Oral (best abstract session)**
2. **Ten Have G.A.M.**, Rice S.A.**\***, Hagve M.**\***, Thaden J.J., Engelen M.P.K.J., Deutz N.E.P. L-Citrulline supplementation stimulates de novo arginine synthesis in the early recovery phase of sepsis in the pig. 2022 European Society for Parenteral and Enteral Nutrition. Clinical Nutrition ESPEN, vol 54, page 483,10.1016/j.clnesp.2022.09.080. **Oral**
3. **Ten Have G.A.M.**, Thaden J.J., Perreira S.L., Engelen M.P.K.J., Deutz N.E.P. β-Hydroxy β-methylbutyric acid (HMB) supplementation stimulates muscle protein synthesis in the early recovery phase of sepsis in the pig. 2022 European Society for Parenteral and Enteral Nutrition. Clinical Nutrition ESPEN, vol 54, page 482-483, 10.1016/j.clnesp.2022.09.079 **Oral**
4. **Gabriella A.M Ten Have,** Peter P. Nghiem, Alexis M. Rutledge, Macie L. Mackey**\***, Sarah A. Rice**\***, Marielle P.K.J. Engelen, Nicolaas E.P. Deutz. Muscle Fatigue Measurements by Percutaneous Neural Stimulation in the Pig: Exploring a New Fatigue Protocol and Data Analysis. Swine in Biomedical Research 2022. poster
5. **Ten Have GAM**, Thaden JJ, Pereira SL, Engelen MPKJ, Deutz NEP. β-Hydroxy β-methylbutyric acid (HMB) supplementation reduced whole body protein breakdown in the early recovery phase of sepsis in the pig. 2021 European Society for Parenteral and Enteral Nutrition. Clinical Nutrition ESPEN 2023 Vol. 54 Pages 482-483. DOI: 10.1016/j.clnesp.2022.09.079: **Oral**
6. **Ten Have GAM**, Engelen MPKJ, Wolfe RR, Deutz NEP. Compromised glutamine - glutamate metabolism in a *Pseudomonas aeruginosa* (PM) induced hyperdynamic sepsis-recovery pig model during an anabolic nutritional intervention. 2020 American Society Nutrition. Current Developments in Nutrition 2020 Vol. 4 Issue Supplement\_2 Pages 1147-1147. Online: Poster
7. **Ten Have GAM**, Thaden JJ, Engelen MPKJ, Deutz NEP. Excessive nitrogen uptake by the liver limits the anabolic response to enteral amino acids intervention during early sepsis-recovery. 2020 European Society for Parenteral and Enteral Nutrition. Clinical Nutrition ESPEN 40, 456-457 Online: Poster
8. **Ten Have GAM**, Engelen MPKJ, Wolfe RR, Deutz NEP. Essential amino acids restore protein anabolism in a Pseudomonas aeruginosa (PM) induced hyperdynamic sepsis-recovery pig model.2018 American Society Nutrition, Boston. Poster
9. **Ten Have GAM**, Jansen L**\***, Engelen MPKJ, Deutz NEP. Interorgan β2-Hydroxy β-methylbutyric acid (HMB) and branched chain keto acids (BCKA) transport in the healthy pig. 2018 American Society Nutrition, Boston. Poster
10. **Ten Have GA**, Engelen MP, Wolfe RR, Deutz NE. Severely Compromised Anabolic Response to Nutrition in a Pseudomonas aeroginosa (PM) Induced Hyperdynamic Sepsis-Recovery Pig Model. The FASEB Journal. 2016;30(1 Supplement):682.16-.16. Poster
11. **Ten Have GA**, Engelen MP, Wolfe RR, Deutz NE. Increased muscle myofibrillar protein breakdown rates using 3-methyl-histidine (tau-mHIS) stable isotopes in a Pseudomonas aeroginosa (PM) induced hyperdynamic sepsis pig model. The FASEB Journal. 2016;30(1 Supplement):lb761-lb. Poster
12. **Ten Have GA**, Engelen MP, Wolfe RR, Deutz NE. Glutathione (GSH) Absolute Synthesis Rates (ASR) of Multiple Organs in a Pseudomonas aeroginosa (PM) induced Hyperdynamic Sepsis Pig Model. The FASEB Journal. 2016;30(1 Supplement):742.17-.17. Poster
13. **Ten Have G**, Engelen M, Wolfe R, Deutz N. Protein Fractional Synthesis Rates (FSR) of Multiple Organs in a Pseudomonas aeruginosa (PM) Induced Hyperdynamic Sepsis Pig Model. European Society for Parenteral and Enteral Nutrition conference, Lisbon. PT. Clinical Nutrition. 2015;34:S1. **Oral**
14. **Ten Have G**, Engelen M, Wolfe R, Thaden J, Deutz N. Reduced Protein Synthesis and Breakdown in Jejunal Mucosal Biopsies in a Live Bacteria Induced Hyperdynamic Sepsis Pig Model. European Society for Parenteral and Enteral Nutrition conference, Lisbon. PT. Clinical Nutrition. 2015;34:S33. Poster
15. **Ten Have GA**, Engelen MP, Wolfe RR, Deutz NE. Reduced lung glutamate (GLU) production is the cause of decreased systemic glutamate availability in hyperdynamic sepsis. American Society for Nutrition , San Diego USA. The FASEB Journal. 2012;26(1\_MeetingAbstracts):715.3. Poster
16. **Ten Have GA**, Engelen MP, Wolfe RR, Deutz NE. Muscle breakdown determines Arginine (ARG) availability during hyperdynamic sepsis in the pig. American Society for Nutrition , San Diego USA. The FASEB Journal. 2012;26(1\_MeetingAbstracts):43.7. **Oral**
17. **Ten Have GA**, Engelen MP, Wolfe RR, Deutz NE. Using the phenylalanine (PHE) stable isotope pulse method to measure intracellular protein breakdown and metabolic shunting in the context of sepsis in the pig. American Society for Nutrition, San Diego USA. The FASEB Journal. 2012;26(1\_MeetingAbstracts):42.1. **Oral**
18. **GAM Ten Have**, R Jalan, NEP Deutz. Decreased circulating arginine in ALF mice does not compromise whole body NO production, EUR J GASTROEN HEPAT 19 (10), A16-A16 poster
19. **GAM Ten Have**, R Jalan, NEP Deutz. Decreased circulating arginine in ALF mice does not compromise whole body NO production, The FASEB Journal 20 (5), A1041 poster
20. **GAM Ten Have**, MGW Van den Heuvel, A Blokland, R Jalan, NEP Deutz. Characterization of hepatic encephalopathy (HE) in an acetaminophen (APAP) induced acute liver failure (ALF) mouse model,, FEDERATION AMER SOC EXP BIOL 19 (5), A1048-A1048 poster
21. **GA Ten Have**, A Blokland, R Jalan, NE Deutz. Neuropsychological and behavioral characterisation of a fully-reversible acetaminophen-induced model of hepatic encephalopathy (HE) in mice, JOHN WILEY & SONS INC 42 (4), 358A-359A poster
22. **GA Ten Have**, R Jalan, NE Deutz. Evidence for marked disturbance in whole body and brain glutamate (GLU) metabolism with no alteration of glutamine II (GLN) metabolism in an acetaminophen induced fulminant hepatic encephalopathy (HE) mouse model. JOHN WILEY & SONS INC 42 (4), 364A-365A poster

Presentations at (inter) national conferences (oral/poster co-author. (\*) = mentored undergraduate, graduate or post-doc)

1. CN Perez, JJ Thaden, **GA ten Have**, NE deutz. Tryptophan metabolite microLC-MS/MS method development and its application to clinical research on metabolism relating to aging and chronic diseases. 2023 ASMS Conference on Mass Spectrometry and Allied Topics. Poster
2. JW Resink, W Gerrits, T Hulshof, N Deutz, **G Ten Have**. P215. Higher amino acid demand in portal drained viscera of post-wean piglets. Animal - science proceedings 2022 Vol. 13 Issue 2 Pages 224-225. DOI: <https://doi.org/10.1016/j.anscip.2022.03.418> poster
3. Kang M.C.**\***, Deutz N.E.P., **Gabriella A.M. Ten Have**, John J. Thaden, Engelen M.P.K.J. Aging in older adults induces changes in arginine and glutamine kinetics, partly independent of the presence of comorbidities. 2022 European Society for Parenteral and Enteral Nutrition. Published: Clinical Nutrition ESPEN, Vol 54, page 474, DOI: 10.1016/j.clnesp.2022.09.057 **Oral**
4. Rice S.A.**\***, Deutz N.E.P., Thaden J.J., Engelen M.P.K.J., Deutz N.E.P., **Ten Have G.A.M.** Enhanced splanchnic extraction of nutritional arginine and lower citrulline production play a role in the reduced systemic availability of arginine in the early recovery phase of sepsis in the pig. 2022 European Society for Parenteral and Enteral Nutrition. Published: Clinical Nutrition ESPEN, Vol 54, Page 496, DOI: 10.1016/j.clnesp.2022.09.117 **Poster-tour**
5. Deutz N.E., Ruebush L.E., **ten Have G.A.M.**, Engelen M.P.K.J. Older adults with Mild Cognitive Impairment have a specific reduction in glycine production which is related to an abnormal lipid profile but cannot be explained by abdominal obesity. 2022 European Society for Parenteral and Enteral Nutrition. Published: Clinical Nutrition ESPEN, Vol 54, page 684, DOI: 10.1016/j.clnesp.2022.09.663 Poster
6. Engelen M.P.K.J., **Ten Have G.A.M.**, Thaden J.J., Deutz N.E.P.. Sex related differences in amino acid metabolism in Chronic Obstructive Pulmonary Disease. 2022 European Society for Parenteral and Enteral Nutrition. Published: Clinical Nutrition ESPEN, Vol 54, page 490, DOI: 10.1016/j.clnesp.2022.09.100 **Oral**
7. Deutz N.E.P., Singer P., Wierzchowska-McNew R.A.**\***, Viana M.V., Ben-David I.A., Pantet O., Thaden J.J., **Ten Have G.A.M.**, Engelen M.P.K.J., Berger M.M. Comprehensive metabolic amino acid flux analysis in critically ill male and female patients. 2022 European Society for Parenteral and Enteral Nutrition. Published: Clinical Nutrition ESPEN, Vol 54. Page 464, DOI: 10.1016/j.clnesp.2022.09.031 **Oral**
8. Deutz E.E.N., Ruebush L.E., de Wandel S.**\***, Wierzchowska-McNew R.A.**\***, **ten Have G.A.M.**, Engelen M.P.K.J. Mild cognitive impairment is associated with markers of muscle weakness and reduced bone density, and specific metabolic alterations despite preserved physical activity. American Society Nutrition 2022: **Poster**
9. Knezek S.B.**\***, Engelen M.P.K.J., **Ten Have G.A.M.**, Thaden J.J., Deutz N.E.P. Prediabetes is associated with specific changes in valine metabolism. American Society Nutrition 2022: Poster
10. Wierzchowska-McNew R.A.**\***, Engelen M.P.K.J., Cruthirds C.C.**\***, Thaden J.J., **ten Have G.A.M.**, Deutz N.E.P. Increased Amino Acid Turnover and net Protein Breakdown but Preserved Muscle and Cognitive Function in Obese Middle-Aged Adults. American Society Nutrition 2022: Poster
11. S.A. Rice**\***, G.A.M. Ten Have, M.L. Mackey**\***, C.M. Van Sas**\***, M.P.K.J. Engelen, NEP Deutz. Progressive decrease of the BIA Phase Angle in a Pseudomonas Aeruginosa induced sepsis swine model. A marker of severity? Swine in Biomedical Research 2022: poster
12. M.L. Mackey**\***, S.A. Rice**\***, G.A.M Ten Have, M.P.K.J. Engelen, N.E.P. Deutz. Evaluation of Continuous Glucose Monitors in Septic Swine. Swine in Biomedical Research 2022: poster
13. Wierzchowska-McNew RA**\***, Deutz NEP, Simbo SY**\***, **ten Have, GAM**., Thaden, JJ, Engelen MPKJ. Enhanced anabolic capacity, but unchanged anabolic threshold in clinically-stable normal-weight patients with Chronic Obstructive Pulmonary Disease. 2021 Nutritional Science Research Symposium. Texas A&M University: **Oral**
14. Wierzchowska-McNew RA**\***, Deutz NEP, Simbo SY**\***, **ten Have, GAM.**, Thaden, JJ, Engelen MPKJ. Enhanced anabolic capacity, but unchanged anabolic threshold in clinically-stable normal-weight patients with Chronic Obstructive Pulmonary Disease. 2021 European Society for Parenteral and Enteral Nutrition:Poster
15. DeWandel S.**\***, Engelen M.P.K.J., Wierzchowska-McNew R.A**\***, Thompson J., Kirschner S.K.**\***, Cruthirds C.L.**\***, **Ten Have G.A.M.**, Thaden J.J., Deutz N.E.P. Altered glutamate and glutamine kinetics in Autism Spectrum Disorder. 2021 American Society Nutrition. Online: **Oral**
16. Morse R**\***, **Ten Have GAM**, Thaden JJ, Engelen MPKJ, Hagve M, Deutz NEP. The role of adipose tissue breakdown in the acute phase of sepsis: a comparison of interorgan fluxes of amino acids and glycerol in a *Pseudomonas aeruginosa* induced septic pig model. 2020 The 13th International SCWD Conference on Cachexia, Sarcopenia and Muscle Wasting. Online: **Oral**
17. R.A. Wierzchowska-McNew**\***, M.P.K.J. Engelen, **G.A. Ten Have**, J.J. Thaden, N.E.P. Deutz. Impaired whole-body arginine metabolism in type 2 diabetes. 2020 European Society for Parenteral and Enteral Nutrition. Online: **Oral**
18. R.A. Wierzchowska-McNew**\***, M.P.K.J. Engelen, **G.A. Ten Have**, J.J. Thaden, N.E.P. Deutz. Isoleucine supplementation for ten days does not modify protein and branched-chain amino acid turnover in type 2 diabetes. 2020 European Society for Parenteral and Enteral Nutrition. Online: **Oral**
19. Bendavid I, Zribi B, Ben Arye I, P Singer, **G.A.M. Ten Have**, R.A. Wierzchowska-McNew**\***, M.P.K.J. Engelen , N.E.P. Deutz. Comprehensive amino acid flux analysis in the post-acute phase of critically ill post-surgery patients, compared to healthy matched subjects. 2020 European Society for Parenteral and Enteral Nutrition. Online: **Oral**
20. Bendavid I, Zribi B, Ben Arye I, P Singer, **G.A.M. Ten Have**, R.A. Wierzchowska-McNew**\***, M.P.K.J. Engelen, N.E.P. Deutz. Magnitude of protein catabolic response in critically ill subjects is associated with multiple amino acid and lipolysis related metabolic disturbances. 2020 European Society for Parenteral and Enteral Nutrition. Online: **Oral**
21. Wierzchowska-McNew A.**\***, Engelen M.P.K.J., Knoop K.D., **Ten Have G.A.M.**, Thaden J.J., Deutz N.E.P. Changes in whole-body amino acid metabolism in response to 2 weeks of the Very-Low Calorie Diet are not affected by gender. 2020 American Society Nutrition. Online: Poster
22. Wierzchowska-McNew A.**\***, Engelen M.P.K.J., **Ten Have G.A.M.**, Thaden J.J., Deutz N.E.P. Age-specific differences in whole-body amino acid kinetics, 2020 American Society Nutrition. Online: Poster
23. Sarah K. Kirschner**\***, Nicolaas E. P. Deutz, John J. Thaden,[**Gabriëlla**](https://www.physiology.org/doi/full/10.1152/ajpgi.00407.2018#) **A. M. ten Have**, [Mariëlle](https://www.physiology.org/doi/full/10.1152/ajpgi.00407.2018#) P. K. J. Engelen . Reduced Short-Chain Fatty Acid (SCFA) Plasma Concentrations are Associated with Decreased Psychological Well-being in Clinically Stable Congestive Heart Failure Patients. 2020 American Society Nutrition. Online: Poster
24. S.K. Kirschner**\***, **G.A.M. Ten Have**, M.P.K.J. Engelen, N.E.P. Deutz . Quantitative Differences in Interorgan Kinetics of Short-Chain Fatty Acids (SCFA). 2020 American Society Nutrition. Online: Poster
25. Ligthart-Melis G, Thaden J, **Ten Have G**, Engelen MPKJ, Deutz NEP. The importance of glutamine as a precursor for citrulline synthesis revisited; a stable tracer study in healthy older adults. 2019 American Society Parenteral Enteral Phoenix, AZ. *International Abstract of Distinction* **Oral**
26. Wierzchowska-McNew A.**\***, Deutz N.E.P., Simbo S.Y.**\***, Thaden J.J., **Ten Have G.A.M.**, Engelen M.P.K.J. Protein Digestion, But Not Amino Acid Absorption, Is Compromised during feeding in Chronic Obstructive Pulmonary Disease. 2019 American Thoracic Society. Dallas, USA. Poster
27. Bosoi CR, Oliveira M, Clement MA, Tremblay M, **Ten Have GA**, Deutz NEP, Rose CF. Beneficial Effects of Ornithine Phenylacetate to Attenuate Muscle Mass Loss and to Prevent Hepatic Encephalopathy in Experimental Cirrhosis. Journal of hepatology. 2016;64(64):S445-S. doi: 10.1016/S0168-8278(16)64005-9. WOS:000398711700729. Poster

## Patents

| Deutz NE, Engelen MP, **ten Have G**, Thaden JJ. Pulse stable tracer methods for detection of short-chain fatty acids. US 017371 | 2019 |
| --- | --- |
| Deutz, NE, Ligthart-Melis, GC, Engelen, MP, **Ten Have, GA**. Methods for diagnosing impaired absorption of amino acids, monosaccharides and fatty acids. US 10,234,448 B2 | 2019 |
| Deutz NE, Ligthart-Melis, G, Engelen MP, **Ten Have, GA**. Methods for Diagnosing Impaired Absorption of Amino Acids, Monosaccharides and Fatty Acids. US 15/287,420 | 2017 |

# **Service**

| 2020 - present | Managing editor of the Elsevier Journals “Clinical Nutrition”, International |
| --- | --- |
| 2012 – present | Co-Director of Pharmaceutical compounding at CTRAL. Role: Design, manage, consulting internal/external collaborations concerning pharmaceutical compounding at CTRAL |
| 2020 – present | Director of Animal research lab in the field of Clinical Nutrition and Metabolism. Center for Translational Research on Aging & Longevity (CTRAL). Texas A&M University, TX |
| 2012 – present | Co-Director of analytical laboratory, Center for Translational Research on Aging & Longevity (CTRAL). Texas A&M University, TX |
| 2017 - 2020 | Pharmaceutical compounding implementation at CTRAL. Role: Design USP797 cleanroom, Implementation/designing standard operation protocols, managing Pharmaceutical compounding at CTRAL |
| 2016-2017 | Human Clinical Research Facility (HCRF) building project. Role: User coordinator for design and construction of a multidisciplinary research facility of the College of Education & Human Development (CEDH) |

# **Professional Affiliations and Memberships**

|  | American Society for Nutrition (ASN) |
| --- | --- |
|  | European Society of Clinical Nutrition and Metabolism (ESPEN) |
|  | American Society for Parenteral and Enteral Nutrition (ASPEN) |

# **Professional Presentations/Invited Speaker/Media**

| Invited Presentations |  |
| --- | --- |
| ESPEN (European Society for Clinical Nutrition and Metabolism) Intensive Course in Tracer Methodology in Metabolism, CTMM 2023: How to prepare and use stable tracer solutions, College Station, Texas | March 2023 |
| ESPEN (European Society for Clinical Nutrition and Metabolism) Intensive Course in Tracer Methodology in Metabolism, CTMM 2017: How to prepare and use stable tracer solutions, College Station, Texas | April 2017 |
| CTRAL (Center for Translational Research on Aging & Longevity) Seminar: Pig interorgan metabolic balance studies in sepsis, College Station TX | 2017 |
| CTRAL (Center for Translational Research on Aging & Longevity) Seminar: WholeBody Protein Synthesis and Breakdown in a Pseudomonas Aeroginosa Induced Hyper-dynamic sepsis-recovery Pig Model During Enteral Intervention with Amino Acid (AA) Mixtures. College Station, TX | 2016, |
| Ten Have GAM, Engelen MPKJ, Wolfe RR, Thaden JJ, Deutz NEP. Glutathione metabolism during Pseudomonas aeruginosa induced sepsis in the pig, and the effect of enteral nutritional intervention. European Society for Parenteral and Enteral Nutrition conference, Lisbon. Portugal. 2015;34 | 2015 |

|  | Presentations at (inter) national conferences and symposia. (poster/oral. (\*) = mentored undergraduate, graduate or post-doc)  **Ten Have G.A.M.**, Thaden J.J., Engelen M.P.K.J., Deutz N.E.P. Muscle, jejunum and lung fractional protein synthesis are prominently correlated with whole body protein synthesis in the pig. 2022 European Society for Parenteral and Enteral Nutrition: **Oral (best abstract session)**  **Ten Have G.A.M.**, Rice S.A.**\***, Hagve M.**\***, Thaden J.J., Engelen M.P.K.J., Deutz N.E.P. L-Citrulline supplementation stimulates de novo arginine synthesis in the early recovery phase of sepsis in the pig. 2022 European Society for Parenteral and Enteral Nutrition: **Oral**  **Ten Have G.A.M.**, Thaden J.J., Perreira S.L., Engelen M.P.K.J., Deutz N.E.P. β-Hydroxy β-methylbutyric acid (HMB) supplementation stimulates muscle protein synthesis in the early recovery phase of sepsis in the pig. 2022 European Society for Parenteral and Enteral Nutrition: **Oral**  **Gabriella A.M Ten Have,** Peter P. Nghiem, Alexis M. Rutledge, Macie L. Mackey**\***, Sarah A. Rice**\***, Marielle P.K.J. Engelen, Nicolaas E.P. Deutz. Muscle Fatigue Measurements by Percutaneous Neural Stimulation in the Pig: Exploring a New Fatigue Protocol and Data Analysis. Swine in Biomedical Research 2022. poster  **Ten Have GAM**, Thaden JJ, Pereira SL, Engelen MPKJ, Deutz NEP. β-Hydroxy β-methylbutyric acid (HMB) supplementation reduced whole body protein breakdown in the early recovery phase of sepsis in the pig. 2021 European Society for Parenteral and Enteral Nutrition: **Oral**  **Ten Have GAM**, Engelen MPKJ, Wolfe RR, Deutz NEP. Compromised glutamine - glutamate metabolism in a *Pseudomonas aeruginosa* (PM) induced hyperdynamic sepsis-recovery pig model during an anabolic nutritional intervention. 2020 American Society Nutrition. Current Developments in Nutrition 2020 Vol. 4 Issue Supplement\_2 Pages 1147-1147. Online: Poster  **Ten Have GAM**, Thaden JJ, Engelen MPKJ, Deutz NEP. Excessive nitrogen uptake by the liver limits the anabolic response to enteral amino acids intervention during early sepsis-recovery. 2020 European Society for Parenteral and Enteral Nutrition. Clinical Nutrition ESPEN 40, 456-457 Online: Poster  **Ten Have GAM**, Engelen MPKJ, Wolfe RR, Deutz NEP. Essential amino acids restore protein anabolism in a Pseudomonas aeruginosa (PM) induced hyperdynamic sepsis-recovery pig model.2018 American Society Nutrition, Boston. Poster  **Ten Have GAM**, Jansen L**\***, Engelen MPKJ, Deutz NEP. Interorgan β2-Hydroxy β-methylbutyric acid (HMB) and branched chain keto acids (BCKA) transport in the healthy pig. 2018 American Society Nutrition, Boston. Poster  **Ten Have GA**, Engelen MP, Wolfe RR, Deutz NE. Severely Compromised Anabolic Response to Nutrition in a Pseudomonas aeroginosa (PM) Induced Hyperdynamic Sepsis-Recovery Pig Model. The FASEB Journal. 2016;30(1 Supplement):682.16-.16. Poster  **Ten Have GA**, Engelen MP, Wolfe RR, Deutz NE. Increased muscle myofibrillar protein breakdown rates using 3-methyl-histidine (tau-mHIS) stable isotopes in a Pseudomonas aeroginosa (PM) induced hyperdynamic sepsis pig model. The FASEB Journal. 2016;30(1 Supplement):lb761-lb. Poster  **Ten Have GA**, Engelen MP, Wolfe RR, Deutz NE. Glutathione (GSH) Absolute Synthesis Rates (ASR) of Multiple Organs in a Pseudomonas aeroginosa (PM) induced Hyperdynamic Sepsis Pig Model. The FASEB Journal. 2016;30(1 Supplement):742.17-.17. Poster  **Ten Have G**, Engelen M, Wolfe R, Deutz N. Protein Fractional Synthesis Rates (FSR) of Multiple Organs in a Pseudomonas aeruginosa (PM) Induced Hyperdynamic Sepsis Pig Model. European Society for Parenteral and Enteral Nutrition conference, Lisbon. PT. Clinical Nutrition. 2015;34:S1. **Oral**  **Ten Have G**, Engelen M, Wolfe R, Thaden J, Deutz N. Reduced Protein Synthesis and Breakdown in Jejunal Mucosal Biopsies in a Live Bacteria Induced Hyperdynamic Sepsis Pig Model. European Society for Parenteral and Enteral Nutrition conference, Lisbon. PT. Clinical Nutrition. 2015;34:S33. Poster  **Ten Have GA**, Engelen MP, Wolfe RR, Deutz NE. Reduced lung glutamate (GLU) production is the cause of decreased systemic glutamate availability in hyperdynamic sepsis. American Society for Nutrition , San Diego USA. The FASEB Journal. 2012;26(1\_MeetingAbstracts):715.3. Poster  **Ten Have GA**, Engelen MP, Wolfe RR, Deutz NE. Muscle breakdown determines Arginine (ARG) availability during hyperdynamic sepsis in the pig. American Society for Nutrition , San Diego USA. The FASEB Journal. 2012;26(1\_MeetingAbstracts):43.7. **Oral**  **Ten Have GA**, Engelen MP, Wolfe RR, Deutz NE. Using the phenylalanine (PHE) stable isotope pulse method to measure intracellular protein breakdown and metabolic shunting in the context of sepsis in the pig. American Society for Nutrition, San Diego USA. The FASEB Journal. 2012;26(1\_MeetingAbstracts):42.1. **Oral**  **GAM Ten Have**, R Jalan, NEP Deutz. Decreased circulating arginine in ALF mice does not compromise whole body NO production, EUR J GASTROEN HEPAT 19 (10), A16-A16 poster  **GAM Ten Have**, R Jalan, NEP Deutz. Decreased circulating arginine in ALF mice does not compromise whole body NO production, The FASEB Journal 20 (5), A1041 poster  **GAM Ten Have**, MGW Van den Heuvel, A Blokland, R Jalan, NEP Deutz. Characterization of hepatic encephalopathy (HE) in an acetaminophen (APAP) induced acute liver failure (ALF) mouse model,, FEDERATION AMER SOC EXP BIOL 19 (5), A1048-A1048 poster  **GA Ten Have**, A Blokland, R Jalan, NE Deutz. Neuropsychological and behavioral characterisation of a fully-reversible acetaminophen-induced model of hepatic encephalopathy (HE) in mice, JOHN WILEY & SONS INC 42 (4), 358A-359A poster  **GA Ten Have**, R Jalan, NE Deutz. Evidence for marked disturbance in whole body and brain glutamate (GLU) metabolism with no alteration of glutamine II (GLN) metabolism in an acetaminophen induced fulminant hepatic encephalopathy (HE) mouse model. JOHN WILEY & SONS INC 42 (4), 364A-365A poster |
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# **Grants & Contracts**

| *Current Federal Projects. Total funding = $6,459,065 (Contribution Dr. ten Have: $1,797,362.- )* |  |
| --- | --- |
| NIH - East Carolina University (sub-award) Metabolic inflexibility is related to elevated muscle anaerobic glycolysis. $60,007.- (Role PI) | 2020-2025 |
| DOD-Army-Medical Research and Materiel Command(W81XWH-19-PRMRP-IIRA), Targeted nutritional approach to improve muscle function and physical activity by restoring metabolic deregulations during recovery from sepsis, **$1,770,586.-, (Co-PI, 66.67% effort, $1,180,450.-)** | 2020-2024 |
| Philips Healthcare (sub-award DOD HDTRA1-21-C-0006). Persistent Readiness through Early Prediction (PREP). $768,697,- (co-I, 13.7% effort $105,311.-) | 2021-2022 |
| Philips Healthcare (DOD HDTRA1-21-C-0006). Persistent Readiness through Early Prediction (PREP). $3,859,775.00 (co-PI, 11.7% $451,594.-) | 2021-2022 |

| ***Current Foundation/Collaboration-sponsored Projects. Total funding = $135,399 (Contribution Dr. ten Have: $111.589)*** |  |
| --- | --- |
| ASPEN Rhoads Research Foundation Annual Grant, Targeted nutritional approach to restore metabolic deregulations during recovery from sepsis as assessed by comprehensive metabolic phenotyping, national grant, **$25.000,- (Role: PI)** | 2023 |
| University of California - Davis, The effect of time-restricted eating in multi-organ insulin sensitivity, **$49.316,- (PI)** | 2022-2025 |
| ESPEN Research Fellowship Grant 2021, European Society for Clinical Nutrition and Metabolism, Targeted nutritional approach to improve gut function and short chain fatty acid metabolism by restoring gut absorption during recovery from sepsis, **$47,620.- (co-PI, 50% Effort, $23,810.-)** | 2021-2022 |
| University of Arkansas for Medical Sciences, National Cattlemen's Beef Association, Role of the Protein Matrix in the Anabolic Response to a Ground Beef Patty as Opposed ot the impossible (vegetarian) Burger. Tracer Powders. $13,463.00 (PI) | 2022 |

| ***Current Local-sponsored projects. Total funding = $1000,-*** |  |
| --- | --- |
| USRI - Grant award 2021-2022, institutional grant, $1000,- (PI) | 2021-2022 |

| *Projects Under Review/draft $3,083,607,- (Contribution Dr ten Have: $1,577,727)* |  |
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| National Institute of Health (Prime: University of California Davis). Identification and Characterization of Bioactive Microbial Metabolites for Advancing Research on Microbe-Diet-Host Interactions. **$735,734.- Role on project: Co-PI (28.3% effort, $208.213)** |  |
| National Institute of Health. Insights in gut perturbations to explain systemic health features and the variability in response to exercise rehabilitation in Chronic Obstructive Pulmonary Disease. Role on project: Key personnel | 2022 |
| National Institutes of Health. Targeted nutritional approach to restore muscle health and physical activity after sepsis. **$2,347,873.- Role on project: Co-PI (58.33% effort. $1.369.514** | 2023 |

| *Completed Grant and Project Awards(Total $ as PI or Co-PI: $69,982)* |  |
| --- | --- |
| ASPEN Rhoads Research Foundation Annual Grant, Targeted nutritional approach to restore metabolic deregulations during recovery from sepsis as assessed by comprehensive metabolic phenotyping, **$25.000,- Role in project: PI** | 2021 |
| CEHD Catapult 2020, Insight in the Complex Metabolic Disturbance Underlying Sepsis and the Response to Targeted Nutritional Modulation, institutional grant, $10.000,- (PI) | 2020 |
| USRI – Grant award 2019-2020, institutional grant, $1000,- (PI) | 2019-2020 |
| National Institutes of Health (1R56HL141744-01A1). Targeted nutritional modulation to reduce intrinsic and exercise induced metabolic deregulations, and improve training responsiveness in Chronic Obstructive Pulmonary Disease with muscle dysfunction. Role in project: Key personnel. | 2019-2020 |
| Abbott Nutrition. Preclinical study in pig sepsis model to evaluate the efficacy of HMB on whole body protein turnover using pulse labeling methodology. Role in Project: Key personnel. | 2017 - 2020 |
| Abbott Nutrition. Effects of low dose of Fish Oil (EPA+DHA) vs. combined EPA+DHA and HMB or curcumin supplementation on protein metabolism, muscle mass and functional capacity in moderate to severe COPD. Role in Project: key personnel | 2018 |
| Human Clinical Research Fee-For-Service. Role in project: key personnel | 2019 - 2020 |
| ICAAS. Methionine Tolerance Experiment. Role in Project: key personnel | 2015 - 2016 |
| Ocera Therapeutics Inc. Human Metabolism of Ornithine Phenylacetate. Role in Project: key personnel | 2015 |
| ESPEN Research Fellowship Grant 2012, Effect of enteral nutritional intervention on glutathione metabolism during Pseudomonas aeruginosa induced sepsis in the pig. **$33,982.- Role in project: PI** | 2012 |
| 3R01GM084447-03S1 – National Institutes of Health. Optimal Amino Acid Nutrition in Sepsis – Collaborative Research with Karolinski Institute. Role in Project: key personnel | 2010 - 2012 |
| R01 - GM084447 National Institutes of Health. Optimal Amino Acid Nutrition in Sepsis. Role in project: key personnel | 2008 - 2012 |
| Arkansas Center for Clinical and Translational Research/ National Institute on Health - Development of an innovative panel of methods to measure intestinal macronutrient digestion, absorption, and function. Role in project: key personnel | 2010 - 2012 |
| Unilever-Nutreco. Nutrition of the Gut. Feed/Food solutions for the infected gut. Role in project: key personnel | 2007 - 2010 |
| Unilever R&D Vlaardingen. Absolute Bioavailability of Hoodia Seroidal Glycosides in Pigs # 06D7X. Role in project: key personnel | 2007 - 2008 |
| Absorption kinetics of peptides in pigs. Unilever/DSM. Role in project: key personnel | 2004 - 2006 |
| Top Institute Food and Nutrition. Pig SCFA transport over colonic epithelium & Mouse n-Butyric acid to amino acid transfer. Role in project: key personnel | 2007 - 2008 |
| Cerestar. Measurement of portal production of glucose of 5 wheat-based cereal foodstuffs in pigs. Role in project: key personnel | 2004 |
| Danone-Cerestar. Measurement of the rate of absorption of glucose of 5 wheat-based cereal foodstuffs in pigs. Role in project: key personnel | 2003 |
| European Whey Protein Association and European Dairy Association. Role in project: key personnel | 2002 - 2004 |
| Dutch Gut-Liver foundation WS 91-29. The role of enteral nutrition on adaptation after small bowel resection in the growing individual. Role in project: key personnel | 1993 - 1995 |