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Publications:

Xylo-Oligosaccharide Suplemented Diet Modulates Intestinal and Systemic Immunity

General information
State: Published
Organisations: National Food Institute, Division of Food Microbiology
Authors: Metzdorff, S. B. (Intern), Christensen, A. (Ekstern), Hansen, C. (Ekstern), Bergstrom, A. (Ekstern), Licht, T. R. (Intern), Hansen, A. (Ekstern), Frokiaer, H. (Ekstern)
Pages: 272-272
Publication date: 2013
Conference: 41st Meeting and Summer School of the Scandinavian-Society-for-Immunology, Copenhagen, Denmark, 14/04/2013 - 14/04/2013
Main Research Area: Technical/natural sciences

Publication information
Journal: Scandinavian Journal of Immunology
Volume: 77
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ISSN (Print): 0300-9475
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BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.03 SJR 0.951 SNIP 0.646
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.93 SNIP 0.684 CiteScore 1.97
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.898 SNIP 0.666 CiteScore 1.91
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 0.86 SNIP 0.712 CiteScore 2.05
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 0.88 SNIP 0.749 CiteScore 2.16
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 0.854 SNIP 0.66 CiteScore 2.06
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
Endocrine disrupting properties in vivo of widely used azole fungicides

The endocrine-disrupting potential of four commonly used azole fungicides, propiconazole, tebuconazole, epoxiconazole and ketoconazole, were tested in two short-term in vivo studies. Initially, the antiandrogenic effects of propiconazole and tebuconazole (50, 100 and 150 mg/kg body weight/day each) were examined in the Hershberger assay. In the second study, pregnant Wistar rats were dosed with propiconazole, tebuconazole, epoxiconazole or ketoconazole (50 mg/kg/day each) from gestational day (GD) 7 to GD 21. Caesarian sections were performed on dams at GD 21. Tebuconazole and propiconazole demonstrated no antiandrogenic effects at doses between 50 and 150 mg/kg body weight/day in the Hershberger assay. In the in utero exposure toxicity study, ketoconazole, a pharmaceutical to treat human fungal infections, decreased anogenital distance and reduced testicular testosterone levels, demonstrating a demasculinizing effect on male fetuses. Tebuconazole, epoxiconazole and ketoconazole induced a high-frequency of post-implantation loss, and both ketoconazole and epoxiconazole caused a marked increase in late and very late resorptions. Overall the results show that many of the commonly used azole fungicides act as endocrine disruptors in vivo, although the profile of action in vivo varies. As ketoconazole is known to implicate numerous endocrine-disrupting effects in humans, the concern for the effects of the other tested azole fungicides in humans is growing.

General information
State: Published
Organisations: Division of Toxicology and Risk Assessment, National Food Institute
Authors: Taxvig, C. (Intern), Vinggaard, A. (Intern), Hass, U. (Intern), Petersen, M. A. (Intern), Metzdorff, S. B. (Intern), Nellemann, C. L. (Intern)
Pages: 170-176
Publication date: 2008
Main Research Area: Technical/natural sciences

Publication information
Journal: International Journal of Andrology
Volume: 31
Issue number: 2
ISSN (Print): 0105-6263
Ratings:
BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
BFI (2016): BFI-level 1
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Impact of diisobutyl phthalate and other PPAR agonists on steroidogenesis and plasma insulin and leptin levels in fetal rats

Endocrine disrupting chemicals can induce malformations and impairment of reproductive function in experimental animals and may have similar effects in humans. Recently, the environmental obesogen hypothesis was proposed, suggesting that environmental chemicals contribute to the development of obesity and insulin resistance. These effects could be related to chemical interaction with nuclear receptors such as the peroxisome proliferator activated receptors (PPARs). As several testosterone-reducing drugs are PPAR activators, we aimed to examine whether four PPAR agonists were able to affect fetal testosterone production and masculinization of rats. Additionally, we wished to examine whether these chemicals affected fetal plasma levels of insulin and leptin, which play important roles in the developmental programming of the metabolic system. Pregnant Wistar rats were exposed from gestation day (GD) 7-21 to diisobutyl phthalate (DiBP), butylparaben, perfluorooctanoate, or rosiglitazone (600, 100, 20, or 1 mg/kg bw/day, respectively). Endocrine endpoints were studied in offspring at GD 19 or 21. DiBP, butylparaben and rosiglitazone reduced plasma leptin levels in male and female offspring. DiBP and rosiglitazone additionally reduced fetal plasma insulin levels. In mates, DiBP reduced anogenital testosterone production and testicular expression of Insl-3 and genes related to steroidogenesis. distance, PPAR alpha mRNA levels were reduced by DiBP at GD 19 in testis and liver. In females, DiBP increased anogenital distance and increased ovarian aromatase mRNA levels. This study reveals new targets for phthalates and parabens in fetal male and female rats and contributes to the increasing concern about adverse effects of human exposure to these compounds. (C) 2008 Elsevier Ireland Ltd. All rights reserved.
Impact of first bacterial colonizers on immune system development

**General information**

State: Published
Organisations: Division of Microbiology and Risk Assessment, National Food Institute, Division of Toxicology and Risk Assessment
Authors: Kristensen, M. B. (Intern), Fink, L. N. (Ekstern), Metzdorff, S. B. (Intern), Frøkiær, H. (Ekstern), Licht, T. R. (Intern)
Publication date: 2008
Event: Abstract from 3rd Danish Conference on Biotechnology and Molecular Biology, Vejle, Denmark.
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 234052
Publication: Research › Conference abstract for conference – Annual report year: 2008

Impact of first bacterial colonizers on immune system development and homeostasis

**General information**

State: Published
Organisations: Division of Microbiology and Risk Assessment, National Food Institute, Center for Biological Sequence Analysis, Department of Systems Biology
Authors: Kristensen, M. B. (Intern), Fink, L. N. (Intern), Zeuthen, L. (Intern), Metzdorff, S. B. (Intern), Frøkiær, H. (Ekstern), Licht, T. R. (Intern)
Publication date: 2008

**Publication information**

Original language: English
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 235672
Publication: Research › Sound/Visual production (digital) – Annual report year: 2008

Impact of first bacterial colonizers on immune system development

**General information**

State: Published
Organisations: Division of Microbiology and Risk Assessment, National Food Institute, Division of Toxicology and Risk Assessment
Authors: Kristensen, M. B. (Intern), Fink, L. N. (Ekstern), Metzdorff, S. B. (Intern), Frøkiær, H. (Ekstern), Licht, T. R. (Intern)
Publication date: 2008

Impact of first bacterial colonizers on immune system development and homeostasis

**General information**

State: Published
Organisations: Division of Microbiology and Risk Assessment, National Food Institute, Center for Biological Sequence Analysis, Department of Systems Biology
Impact of first bacterial colonizers on immune system development and homeostasis

General information
State: Published
Organisations: Division of Microbiology and Risk Assessment, National Food Institute, Center for Biological Sequence Analysis, Department of Systems Biology
Authors: Kristensen, M. B. (Intern), Fink, L. N. (Intern), Metzdorff, S. B. (Intern), Frøkiær, H. (Ekstern), Licht, T. R. (Intern)
Publication date: 2008
Event: Poster session presented at 3rd Danish Conference on Biotechnology and Molecular Biology, Vejle, Denmark.
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 235669
Publication: Research › Sound/Visual production (digital) – Annual report year: 2008

Impact of first bacterial colonizers on immune system development and homeostasis' ved symposium

General information
State: Published
Organisations: Division of Microbiology and Risk Assessment, National Food Institute, Center for Biological Sequence Analysis, Department of Systems Biology
Authors: Kristensen, M. B. (Intern), Fink, L. N. (Intern), Metzdorff, S. B. (Intern), Frøkiær, H. (Ekstern), Licht, T. R. (Intern)
Publication date: 2008
Event: Abstract from 3rd Danish Conference on Biotechnology and Molecular Biology, Vejle, Denmark.
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 235674
Publication: Research › Conference abstract for conference – Annual report year: 2008

Impact of first bacterial colonizers on immune system development and homeostasis

General information
State: Published
Organisations: Division of Microbiology and Risk Assessment, National Food Institute, Division of Toxicology and Risk Assessment
Authors: Kristensen, M. B. (Intern), Licht, T. R. (Intern), Fink, L. N. (Ekstern), Metzdorff, S. B. (Intern), Frøkiær, H. (Ekstern)
Publication date: 2008
Event: Poster session presented at 6th Joint INRA-RRI Symposium on Gut Microbiome, Functionality, Interaction with the host and Impact on the environment, Clermont-Ferrand, France.
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 234062
Publication: Research › Poster – Annual report year: 2008

Impact of first bacterial colonizers on immune system development and homeostasis

General information
State: Published
Organisations: Division of Microbiology and Risk Assessment, National Food Institute, Division of Toxicology and Risk Assessment
Authors: Kristensen, M. B. (Intern), Licht, T. R. (Intern), Fink, L. N. (Ekstern), Metzdorff, S. B. (Intern), Frøkiær, H. (Ekstern)
Publication date: 2008
Combined exposure to anti-androgens exacerbates disruption of sexual differentiation in the rat

**General information**
State: Published
Organisations: Division of Toxicology and Risk Assessment, National Food Institute
Authors: Hass, U. (Intern), Scholze, M. (Ekstern), Christiansen, S. (Intern), Dalgaard, M. (Ekstern), Vinggaard, A. M. (Ekstern), Petersen, M. A. (Intern), Metzdorff, S. B. (Intern), Kortenkamp, A. (Ekstern)
Pages: 122-128
Publication date: 2007

**Publication information**
Journal: Environmental Health Perspectives
Volume: 115
Issue number: 1
ISSN (Print): 0091-6765
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BFI (2018): BFI-level 2
BFI (2017): BFI-level 2
Web of Science (2017): Indexed Yes
Scopus rating (2016): CiteScore 5.62 SJR 3.067 SNIP 2.362
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 2
Scopus rating (2015): SJR 3.569 SNIP 2.363 CiteScore 5.58
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 2
Scopus rating (2014): SJR 3.244 SNIP 2.319 CiteScore 5.13
BFI (2013): BFI-level 2
Scopus rating (2013): SJR 3.059 SNIP 2.354 CiteScore 4.92
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 2
Scopus rating (2012): SJR 2.949 SNIP 2.319 CiteScore 4.77
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 2
Scopus rating (2011): SJR 3.125 SNIP 2.314 CiteScore 4.56
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 2
Scopus rating (2010): SJR 2.744 SNIP 2.188
BFI (2009): BFI-level 2
Scopus rating (2009): SJR 2.591 SNIP 2.209
Web of Science (2009): Indexed yes
BFI (2008): BFI-level 2
Scopus rating (2008): SJR 2.58 SNIP 2.278
Web of Science (2008): Indexed yes
Scopus rating (2007): SJR 2.33 SNIP 2.255
Web of Science (2007): Indexed yes
Dysgenesis and histological changes of genitals and perturbations of gene expression in male rats after in utero exposure to antiandrogen mixtures

We investigated the ability of a mixture of three androgen receptor antagonists to induce disruption of male sexual differentiation after perinatal exposure. The aim was to assess whether the joint effects of vinclozolin, flutamide, and procyomidone can be predicted based on dose-response data of the individual chemicals. Chemicals were administered orally to pregnant Wistar rats from gestational day 7 to postnatal day 16. Changes in reproductive organ weights and of androgen-regulated gene expression in prostates from male rat pups were chosen as end points for extensive dose-response studies. With all end points, the joint effects of the three antiandrogens were dose additive. Histological evaluations showed that dysgenesis and hypoplasia of prostates, seminal vesicles, and epididymis were seen with the highest mixture doses. No changes were observed in any single-compound low-dose group for these lesions, nor were there histopathological changes in the testes. Pronounced dysgenesis of external genitals was observed with all doses of the mixture, and severe dysgenesis was seen with a mixture for which the individual compounds caused no effects. A combination of doses of each chemical that on its own did not produce significant reductions in the weights of seminal vesicles and PBP C3 expression induced a marked mixture effect. Thus, antiandrogens cause additive effects on end points of various molecular complexities such as alterations at the morphological and the molecular level. Exposure to antiandrogens, which appears to exert only small effects when judged on a chemical-by-chemical basis, may induce marked responses in concert with, possibly unrecognized, similarly acting chemicals.

General information
State: Published
Organisations: Division of Toxicology and Risk Assessment, National Food Institute, Technical University of Denmark
Pages: 87-98
Publication date: 2007
Main Research Area: Technical/natural sciences

Publication information
Journal: Toxicological Sciences
Volume: 98
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BFI (2018): BFI-level 2
BFI (2017): BFI-level 2
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 2
Scopus rating (2016): SJR 1.53 SNIP 1.142 CiteScore 3.88
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 2
Scopus rating (2015): SJR 1.65 SNIP 1.208 CiteScore 4.06
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 2
Effects of azole fungicides on the function of sex and thyroid hormones

Azole-fungicides are frequently used in Denmark. Epoxiconazole, propiconazole, and tebuconazole had endocrine disrupting properties in cell based assays. In rats, epoxiconazole and tebuconazole increased gestational length, maternal progesterone level, and masculinized female-offspring. Besides, tebuconazole caused feminization of male-offspring. Similar effects were previously demonstrated for prochloraz. The results indicate that azole-fungicides in general have endocrine disrupting properties.

General information
State: Published
Organisations: Division of Toxicology and Risk Assessment, National Food Institute, University of Southern Denmark
Publication date: 2007
Evaluation of a non-targeted "Omic" approach in the safety assessment of genetically modified plants

Genetically modified plants must be approved before release in the European Union, and the approval is generally based upon a comparison of various characteristics between the transgenic plant and a conventional counterpart. As a case study, focusing on safety assessment of genetically modified plants, we here report the development and characterisation of six independently transformed Arabidopsis thaliana lines modified in the flavonoid biosynthesis. Analyses of integration events and comparative analysis for characterisation of the intended effects were performed by PCR, quantitative Real-time PCR, and High Performance Liquid Chromatography. Analysis by cDNA microarray was used as a non-targeted approach for the identification of potential unintended effects caused by the transformation. The results revealed that, although the transgenic lines possessed different types of integration events, no unintended effects were identified. However, we found that the majority of genes showing differential expression were identified as stress-related genes and that environmental conditions had a large impact on the expression of several genes, proteins, and metabolites. We suggest that the microarray approach has the potential to become a useful tool for screening of unintended effects, but state that it is crucial to have substantial information on the natural variation in traditional crops in order to be able to interpret "omics" data correctly within the framework of food safety assessment strategies of novel plant varieties, including genetically modified plant varieties.
Mechanisms of action underlying the antiandrogenic effects of the fungicide prochloraz

The fungicide prochloraz has got multiple mechanisms of action that may influence the demasculinizing and reproductive toxic effects of the compound. In the present study, Wistar rats were dosed perinatally with prochloraz (50 and 150 mg/kg/day) from gestational day (GD) 7 to postnatal day (PND) 16. Caesarian sections were performed on selected dams at GD 21, while others were allowed to give birth to pups that were followed until PND 16. Prochloraz caused mild dysgenesis of the male external genitalia as well as reduced anogenital distance and retention of nipples in male pups. An increased anogenital distance indicated virilization of female pups. Effects on steroidogenesis in male fetuses became evident as decreased testicular and plasma levels of testosterone and increased levels of progesterone. Ex vivo synthesis of both steroid hormones was qualitatively similarly affected by prochloraz. Immunohistochemistry of fetal testes showed increased expression of 17 alpha-hydroxylase/17,20-lyase (P450c17) and a reduction in 17 beta-hydroxysteroid dehydrogenase (type 10) expression, whereas no changes in expression of genes involved in testicular steroidogenesis were observed. Increased expression of P450c17 mRNA was observed in fetal male adrenals, and the androgen-regulated genes ornithine decarboxylase, prostatic binding protein C3 as well as insulin-like growth factor I mRNA were reduced in ventral prostates PND 16. These results indicate that reduced activity of P450c17 may be a primary cause of the disrupted fetal steroidogenesis and that an altered androgen metabolism may play a role as well. In vitro studies on human adrenocortical carcinoma cells supported the findings in vivo as reduced testosterone and increased progesterone levels were observed. Overall, these results together indicate that prochloraz acts directly on the fetal testis to inhibit steroidogenesis and that this effect is exhibited at protein, and not at genomic, level. (c) 2005 Elsevier Inc. All rights reserved.

General information
State: Published
Organisations: Division of Toxicology and Risk Assessment, National Food Institute, Cell biology and virology Group, Biomedical Micro Systems Section, Department of Micro- and Nanotechnology, Technical University of Denmark
Authors: Laier, P. (Ekstern), Metzdorff, S. B. (Intern), Boberg, J. (Intern), Hagen, M. (Intern), Hass, U. (Intern), Christiansen, S. (Intern), Petersen, M. A. (Intern), Kledal, T. (Ekstern), Dalgaard, M. (Ekstern), McKinnell, C. (Ekstern), Brokken, L. J. S. (Ekstern), Vinggaard, A. (Intern)
Pages: 160-171
Publication date: 2006
Main Research Area: Technical/natural sciences
Mechanisms underlying the anti-androgenic effects of diethylhexyl phthalate in fetal rat testis

Diethylhexyl phthalate (DEHP) is widely used as a plasticizer in consumer products and is known to disturb the development of the male reproductive system in rats. The mechanisms by which DEHP exerts these effects are not yet fully elucidated, though some of the effects are related to reduced fetal testosterone production. The present study investigated the effects of four different doses of DEHP on fetal testicular histopathology, testosterone production and expression of proteins and genes involved in steroid synthesis in fetal testes. Pregnant Wistar rats were gavaged from GD 7 to 21 with vehicle, 10, 30, 100 or 300 mg/kg bw/day of DEHP. In male fetuses examined at GD 21, testicular testosterone production ex vivo and testicular testosterone levels were reduced significantly at the highest dose. Histopathological effects on gonocytes were observed at 100 and 300 mg/kg bw/day, whereas Leydig cell effects were mainly seen at 300 mg/kg bw/day. Quantitative RT-PCR revealed reduced testicular mRNA expression of the steroidogenesis related factors SR-B1, STAR, PBR and P450scc. Additionally, we observed reduced mRNA expression of the nuclear receptor SF-1, which regulates certain steps in steroid synthesis, and reduced expression of the cryptorchidism-associated Insl-3. Immunohistochemistry showed clear reductions of STAR, PBR, P450scc and PPAR gamma protein levels in fetal Leydig cells, indicating that DEHP affects regulation of certain steps in cholesterol transport and steroid synthesis. The suppression of testosterone levels observed in phthalate-exposed fetal rats was likely caused by the low expression of these receptors and enzymes involved in steroidogenesis. It is conceivable that the observed effects of DEHP on the expression of nuclear receptors SF-1 and PPAR gamma are involved in the downregulation of steroidogenic factors and testosterone levels and thereby underlie the disturbed development of the male reproductive system. (c) 2006 Elsevier Ireland Ltd. All rights reserved.
Antiandrogenic effects in short-term in vivo studies of the fungicide fenarimol

The fungicide fenarimol has estrogenic and antiandrogenic activity and inhibits aromatase activity in vitro. We tested, whether fenarimol had antiandrogenic effects in vivo. In a Hershberger assay, fenarimol given orally to castrated testosterone-treated male rats caused markedly reduced weights of ventral prostate, seminal vesicles, musc. levator antitbulocavernosus, and bulbourethral glands. Qualitatively similar, but weaker, effects were also evident in intact fenarimol-exposed young adult males, except that prostates were not significantly affected. Changes in androgen-regulated gene expression were determined by real-time RT-PCR in ventral prostates and fenarimol caused a pronounced decrease of prostate binding protein C3 (PBP C3), ornithin decarboxylase (ODC), and insulin-like-growth factor 1 (IGF-1) mRNA levels. The antiandogentic drug flutamide, included as a positive control, caused down-regulation of PBP C3 mRNA and up-regulation of TRPM-2 mRNA levels. Serum T4 levels were reduced after fenarimol treatment and a tendency towards increased LH levels was seen. However, no effects on testosterone levels or testosterone production ex vivo could be revealed. Taken together these results indicate that fenarimol acts as an antiandrogen in vivo having effects qualitatively comparable to those of flutamide on organ level, whereas differential effects on gene expression were observed. In an additional Hershberger test, the effects of fenarimol were compared to those of estradiol benzoate, prochloraz and the aromatase inhibitor fadrozole. The data indicate a similar mode of action of fenarimol and prochloraz in the males, whereas no indications were found that the estrogenic or aromatase inhibitory properties had important impact on the effects observed in the males. Thus, it is suggested that fenarimol mediates its antiandrogenic effects at least partly via antagonism of androgen receptors.
Are PPARs involved in the DEHP-induced suppression of fetal testosterone levels?

General information
State: Published
Gene expression profiling of rat liver after in utero exposure to the fungicide prochloraz using GeneChip (R) Rat Genome Array

General information
State: Published
Organisations: National Food Institute, Division of Toxicology and Risk Assessment
Authors: Metzdorff, S. B. (Intern), Laier, P. (Ekstern), Dalgaard, M. (Ekstern), Hass, U. (Intern), Vinggaard, A. (Intern)
Pages: 1-189
Publication date: 2005
Main Research Area: Technical/natural sciences

Publication information
Journal: Journal of Biotechnology
ISSN (Print): 0168-1656
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BFI (2018): BFI-level 1
BFI (2017): BFI-level 1
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 2.88 SJR 0.976 SNIP 0.937
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 1.068 SNIP 0.987 CiteScore 2.87
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 1.113 SNIP 1.144 CiteScore 2.95
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 1.173 SNIP 1.188 CiteScore 3.22
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 1.255 SNIP 1.312 CiteScore 3.4
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 1.157 SNIP 1.064 CiteScore 2.87
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 1.126 SNIP 1.18
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 1.216 SNIP 1.235
Web of Science (2009): Indexed yes
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 1.136 SNIP 1.265
Low-dose effects of anti-androgens in male rat offspring after perinatal exposure

General information
State: Published
Organisations: Division of Toxicology and Risk Assessment, National Food Institute, Sektion for Eksotiske Virussygdomme, Division of Virology, National Veterinary Institute
Authors: Hass, U. (Intern), Christiansen, S. (Intern), Dalgaard, M. (Ekstern), Filinska, M. (Intern), Borch, J. (Intern), Vinggaard, A. (Intern), Metzdorff, S. B. (Intern)
Publication date: 2005
Event: Abstract from The CREDO Cluster Workshop on Endocrine Disrupters: Exposure Assessment, Epidemiology, Low-dose and Mixture Effects, Prague, .
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 247905
Publication: Research - peer-review › Conference abstract in journal – Annual report year: 2005

Metabolite profiling of Arabidopsis thaliana (L.) plants transformed with an antisense chalcone synthase gene
A metabolite profiling study has been carried out on Arabidopsis thaliana (L.) Heynh. ecotype Wassilewskija and a series of transgenic lines of the ecotype transformed with a CHS (chalcone synthase) antisense construct. Compound identifications by LC/MS and H-1 NMR are discussed. The glucosinolate composition in rosette leaves was shown to vary naturally within this ecotype. Relatively modest environmental changes had a strong effect on the wild type level of flavonoids and some sinapate esters but much less effect on the glucosinolates. Potentially a reduction in the level of flavonoids could be expected in the transgenic lines relative to the wild type. In practice the reductions achieved were highly variable both between lines and within a given line on different occasions when the plants were grown. Possible reasons for this variability are discussed with reference to current models of gene silencing. The metabolite profiles of the transgenic lines were examined for unintended effects of the modification. An apparently major effect on the glucosinolate composition was shown to result from an unusual genetic variation in the ecotype and not from the modification. The modification did produce a different but much more subtle change in the levels of certain glucosinolates.

General information
State: Published
Organisations: National Food Institute, Division of Toxicology and Risk Assessment
Authors: Le Gall, G. (Ekstern), Metzdorff, S. B. (Intern), Pedersen, J. W. (Intern), Bennett, R. N. (Ekstern), Colquhoun, I. (Ekstern)
Pages: 181-198
Publication date: 2005
Main Research Area: Technical/natural sciences
Publication information
Primary and Secondary Metabolites Profiling in Arabidopsis Thaliana (L) Ecotype Wassilewskija With an Antisense Chalcone Synthase Transgene

General information
State: Published
Organisations: National Food Institute, Division of Toxicology and Risk Assessment
Authors: Gall, G. L. (Ekstern), Metzdorff, S. B. (Intern), Pedersen, J. W. (Intern), Bennett, R. N. (Ekstern), Colquhoun, I. J. (Ekstern)
Pages: 181-198
Publication date: 2005
National Institute of Aquatic Resources
Period: 04/01/2007 → 31/12/2011
Number of participants: 10
Project participant:
Wilcks, Andrea (Intern)
Bergström, Anders (Intern)
Andersen, Jens Bo (Intern)
Metzdorff, Stine Broeng (Intern)
Fink, Lisbeth Nielsen (Intern)
Nielsen, Nina Skall (Intern)
Project Manager, organisational:
Licht, Tine Rask (Intern)
Frøkiær, Hanne (Intern)
Hellgren, Lars (Intern)
Jacobsen, Charlotte (Intern)

Financing sources
Source: [Ordinær drift UK 10]
Name of research programme: [Ordinær drift UK 10]
Amount: 3,250,000.00 Danish Kroner

Effects of bacterial colonization on immune maturation
The Gut Ecology group at the National Food Institute, Technical University of Denmark investigates effects of bacterial colonization on the maturation of the immune system in early life.

We do this by use of germ-free and monoclonized mouse models.

The project is closely related to other projects in the Gut Ecology research group, where we analyze the intestinal microbiota in infants.

Project financing:
Globalization funds (through FoodDTU)
National Food Institute
Division of Food Microbiology
Communications and Management Secretariat
Period: 01/01/2007 → 01/01/2012
Number of participants: 7
Number of related Ph.D. students: 1
Project participant:
Bergström, Anders (Intern)
Nellemann, Christine (Intern)
Frøkiær, Hanne (Intern)
Metzdorff, Stine Broeng (Intern)
Fink, Lisbeth Nielsen (Intern)
Project Manager, organisational:
Licht, Tine Rask (Intern)
PhD Student:
Kristensen, Matilde Bylov (Intern)

Activities:

Are PPARs involved in the DEHP-induced suppression of fetal testosterone levels?
Period: 1 Jan 2005 → …
Stine Broeng Metzdorff (Speaker)
National Food Institute

Description
Place: 4th Forum Meeting and CREDO Workshop on Endocrine Disruption

Related external organisation
Unknown external organisation
Activity: Talks and presentations › Conference presentations