Open Letter of extensive arguments To Whom It May Concern at Office Genetically Modified Organisms (GMO Office http://bggo.rivm.nl) and the other Ministry Officials Involved... Environment, Agriculture, etc. as well as to the public at large!

To Whom It May Concern at Office Genetically Modified Organisms (GMO Office http://bggo.rivm.nl) and the other Ministry Officials Involved... Environment, Agriculture, etc.

We are writing this letter to inquire about the approval or denial of the permit we applied for to Introduce Art Exhibition Quality Genetically Modified Organisms into the Environment. The permit was applied for in response to the call of Bioart to meet the public in a living and artistically altered way in the show Ja Natuurlijk (ja-natuurlijk.com) at the Gemeente Museum, Ine Gevers curator, den Hague. The constructs of the gene cassettes and the enigmatic nature of the Bipolar Flower are spelled out in the permit application and the public deserves to be treated to a succinct answer from the Ministry on this issue before the closing of the show in mid august. Can we get an answer or an update?

We sense that there is a stalling due to politics. We have heard that the permit may fail due to the following:

- Design issue changes from the original containment plan in the permit
- The risk of the novelty plant to the environment
- The animal byproduct embryos (parent animal care and sacrificial disposal)
- The difficult political stance of my presentation at the SUPERPLANTs symposium
- The Occupy Monsanto movement and continued resistance to GMOs in the EU and other global estates abroad
- The Biosolar Cells consortium corporate partners, managers or other interested parties blocking Ministry approval of permits not deemed industrial enough, or aesthetically future positive enough to represent big science propaganda
- Inability to do a risk benefit analysis on an artwork due to the qualitative nature of the data set pertaining to art
- Just big government dragging its big feet without any political agenda, just slow, legally blonde and indecisive?

Let me address the potentials quickly:

1. **ARTISTIC RESPONSE:** Design issue changes from the original containment plan in the permit:
The Errorarium is triple contained instead of the called-for single containment. We made a throughout instead of a leur locked, no back flow, fish embryo bleach and flush funnel as originally described. The irrigation could easily be retrofitted to make an Errorarium kill jar but with the triple containment we could use the first level of containment glove box as a type of space of closure for the medical arts waste (embryonic animal byproduct kill jar), which is cleaner than a funnel for corpse flushing with or without leur locks). I think the redesign was towards a safer and more advanced containment of GMOs from potential plant or pollen leaking into the lifeworld outside of the laboratory-lab continuum. In other words, the Errorarium design changes made it a superior containment facility for public experience with GMOs in actuality.

2. ARTISTIC RESPONSE: The risk of the novelty plant to the environment

My wish is that the Ministry's decision to mumble a bit and fade out on this political issue is actually about not wanting to publically reject the release permit due to the unknown quantities of the plant produced in lab. The plant itself, being the only official GMO for which the permit to display pertains to and the only fertile containment issue for the type of permit requested, is the crux of the issue.

The permit asks: Are there previously performed with genetically modified plants or plants with similar genetic modification? If yes, please give a description of the work performed and the results.

Our Answer: Yes, there are already almost identical experiments performed with ATFs (artificial transcription factors) (Lindhout et al, 2006), this was however only 1 activator (VP16). It was shown that the ATFs the transcription in the plant genome in high degree.

The Permit asks us to describe the new or changed properties of the GMO.

Our Answer: The GMO is produced through artificial transcription factors having a direct influence (activation or repression, depending on the zinc finger) on the transcription of the plant genome. Since the activating transcription factors and the repressor transcription factors will compete for the same binding domain, it is not possible to say which genes are activated, and which can be deactivated. This will also differ from plant to plant and even from cell to cell.

This is a way of under-emphasizing that the bipolar plants have been genome kicked with one activator and one repressor competing for the same binding domain (500+ have not ever been made in lab, much less exhibited as art. In fact we have create a mosaic of unusual combinatory expression pattern novelties of genetic and epigenetic enormity, without a care for repeatability or utilizability. The permit correctly, in the culture of risk assessment for GM release, identifies the risk as negligible. I personally question if there is any way to assess the risk of the plant as it is unlike any plant known and defies even the utilitarian notions of whole genome fracking due to the creative or permutative or jazz application of the two vectors aimed at competing zinc finger coordinates.
The Bipolar Flower, Bipolar (manic-depressive), Double Dipped, Zinc Fingered (ZF), GMO Arabidopsis Thaliana plants. These are plants who have been ‘whole genome fracked’ in a bipolar duet of two artificial transcription factors (activating and repressing) competing for the 524 GTA GAG GAG binding places on the Arabidopsis genome. The name of the particular zinc finger, whole genome frack device used to turn this plant out, is 16VD, with the binding domain: GTA GAG GAG. Inserted in the lab of Dr. Ir. Bert van der Zaal (in collaboration with David Louwrier and Neils van Tol), by means of floral double dipping, the vector Agrobacterium tumefaciens (the hypervirulent kind Agl-1) has infected buds with protein therapeutic interrogative alterity. These buds became bipolar flowers from which the seeds to the plants you see in front of you have been born.

The plants are named after their floral wombs and the romantic birth defects they carry from our heavy-handed work. The construct is controlled by RPS5A, the promoter of the ribosomal protein gene. The used expression vectors are a modified version of the pGPTV-KAN vector (Becker et al., 1992). The two different constructs are: pRF-VP16-3F, fused with the VP16 activation (manic) domain and a Hygromicine resistance gene. pRF-EAR-3F is fused with the repressor (depressive) domain EAR and the Kanamycin resistance gene. The competition inside the plant’s genome is for the up or down regulating of expression patterns of all 524 of GTA GAG GAG downstream genes in the Arabidopsis thaliana (mustard weed).

These genes are either turned on and off or regulated up and down according to the chance play of falling activation and repression domain inserts running heedless in an intensive virulence minuet claiming limited space in the plant’s resultant bipolar disordered (mood, energy, and ability to function) mixed episode gene expression, decanalization swinger response mechanisms. It has been suggested that due to up regulation of atavistic genes and resurgence (ancestral gene recapitulation) of deep time traits unrepressed by suddenly down regulated paternalist genes (upstream), the Bipolar Flower may no longer be accurately classified simply as a plant.

Why is this plant safe or not safe for release into the environment? How is this assessment made? How was this plant risk assessed?

3. ARTISTIC RESPONSE: The animal byproduct embryos (parent animal care and sacrificial disposal)

We hear that there may have been some objection to the Care and Use of pre-organisms, pre-animals or the developing embryos of the zebrafish vertebrate fertilized eggs. Most of this has not been directed towards the rights of the preborn or the fate of the de-born but the parents of the animal byproduct kindred and their questionable permits for Institutional care and use not including the particular art usage with which their bearing young was intended for (scientific research). Was the use of the parents of zebrafish embryos as an IUCIC issue part of the decision making process? Is the current limit of vertebrate designation meant to be kept uncirculated in the public due to the queerness of party for animals extending their reach into the legal area reserved for abortion activists and connoisseurs of caviar?
Did we microinject zebrafish embryos, wild insects and worms with algae and release them at the Llowlands Llowlab and at Ja Natuurlijk. This is not genetic manipulation but a kind of multispecies bestiality and enigmatic forced symbiosis and does not need a GMO permit although it may need a looking into due to discomfort, high tech hand pollination and dismay of meaning in the lifeworld.

4. ARTISTIC RESPONSE: The difficult political stance of my presentation at the SUPERPLANTs symposium

Was the SUPERPLANTS lecture too unfavorable to support the passing of a controversial permit? I did haul off and speak my mind in the lecture, backed up by my two-year report that you can read below. Was the picture of myself with fishes up in my ass in the context of the transgression of species boundaries in transgenic modification as well as the health benefits of fecal transplants alluded not a prescient maneuver? What about the concept of Sustainable Weapons for the USAF Green Fleet of biofueled F-18 fighter jets? I support the investigation into Agent Green (as opposed to Agent Orange) because Sustainable Napalm is the future defoliant that reduces carbon credits as it burns and if we apply our innovation funding, giving cancer to plants, animals and humans alike, while melting them could be CO2 neutral by 2023.

I don’t think that an honest opinion from the Artist in lab: Making a field of interpretation for BioSolar Cells¹, which says clearly, “Artists, scientists and scholars create an open space for public discussion of the implications of the biobased economy. Artists design Genetic Modified photosynthesis living constructs that go beyond the idea of beauty in order to evoke an experience of the implications of the BioSolar Cells program – and its follow-up in a biobased economy – to the public. … The artists involved in the project use artistic media, including GM photosynthesis constructs, to provide the public with a window on the science and the scientific practice across and beyond the three themes of BioSolar Cells. The project will be a success if it produces a new form of science communication and commitment of the public for active participation based on art for public debate.” I believe this is what this debate we are opening to the public is doing, so is the Ministry committed to public debate or not? Certainly Biosolar Cells is committed as they continue to proudly post my work for them:


And allow for conflicting opinion at their presentations:

http://www.youtube.com/watch?v=6LrJ2UBxM6E

http://www.youtube.com/watch?v=8g1Xlplb_lrk

In any case, I feel vilified that BSC is willing to let their artist in residence speak his mind. Did the members of the Ministry staff at the SUPERPLANTS lectures also keep an open mind to the freedom of speech and expression that artists are prone to test when making final decisions not to make any final decisions?

5. **ARTISTIC RESPONSE:** The Occupy Monsanto movement and continued resistance to GMOs in the EU and other global estates abroad.

This is a Call to Action for a Non-Hierarchical Occupation of Monsanto Everywhere

"Whether you like it or not, chances are Monsanto contaminated the food you ate today with chemicals and unlabeled GMOs. Monsanto controls much of the world’s food supply at the expense of food democracy worldwide. This site is dedicated to empowering citizens of the world to take action against Monsanto & it’s enablers like the FDA, USDA, EPA, GMA, BIO, and the processed food companies that use Monsanto’s products.” –

6. **ARTISTIC RESPONSE:** The Biosolar Cells consortium corporate partners, managers or other interested parties blocking Ministry approval of permits not deemed industrial enough, or aesthetically future positive enough to represent big science propaganda

I know the role that I played was pro-GMO as pro-PORN manipulation art meets luddite, hazard-monger Cassandra complex with the added odd tenor of being for the production of transgenic-humans through IGM and creative genomics while holding an anti-algae-engineering stance.
Alliander N.V.
BASF Antwerpen N.V.
Biclear B.V.
Biomethanol Chemie Nederland B.V.
Bio-Oils Energy S.L.
Bruker Nederland B.V.
Culgi B.V.
Desah B.V.
Drie Wilgen Development
DSM
Ecofys Netherlands B.V.
ENZA Seeds
Exxonmobil Research And Engineering Company
Gea Westfalia Separator Nederland B.V.
Heliae Development LLC
InCatT B.V.
LioniX B.V.
Monsanto
Neste Oil
Nijhuis Water Technology B.V.
Paques B.V.
PDX
Philips Electronics Nederland B.V.
Plant Dynamics B.V.
Plant-E B.V.
Powerhouse B.V.
Productschap Tuinbouw
Proviron Holding N.V.
Roquette Freres S.A.
Saudi Basic Industries Corporation
Simris Alg AB
Stichting Waag Society
Staatsolie Maatschappij Suriname N.V.
Synthetic Genomics Incorporated
Unilever Research And Development
Vlaardingen B.V.

Did any of the managers of Biosolar Cells or any of the above, profit driven funders of Biosolar Cells (or any other interested parties with a stake in censoring critical art practices) make conflicting arrangements with your office or any secretaries of your office about putting the art permit for genetically modified release in permanent bureaucratic purgatory, stall or wake turbulence due to any of the above reasons or any other reason?¹

7. ARTISTIC RESPONSE: Inability to do a risk benefit analysis on an artwork due to the qualitative nature of the data set pertaining to art.

This could be pure research or proof of concept or conceptual investigation or just alterity for laterite's sake, so the benefit of this organism to any being but it's own urge to survive, may be at stake. If we were to put a price on bipolar flowers, the cost would, in our capitalist world, equal a benefit for driving an art market tied exclusively to a western styled IMF economy. So, for the sake of emphasizing benefit, the flowers of these plants are priced by the artist at 3000 euro per dozen, half of which will go towards the support of a biotech company emphasizing artistic study into birth defects. This being said, now we have a benefit to humanity based on essential profit motive (the higher good), we have not even thought to openly assess the plant's risk level for the environment.

I asked Robert-Jan Geertz climate and techno philosopher engaged in the Biosolar Cells consortium: How do we make an informed risk benefit analysis of the potential harm engineered foreign species invasions might incur?

Robert-Jan Geerts, “This is very tricky for at least two ethical reasons (and probably for some technical reasons as well):

1) cost(or risk)/benefit analyses are inherently utilitarian, and don't account for the distribution of risks and benefits, which makes their application problematic

2) risk is experienced differently by different people. There is no argument (except pure utilitarianism, which is rejected by most philosophers these days) that a certain risk*cost is acceptable or not. This is especially problematic in cases of low likelihood and catastrophic consequences.

Then there's also uncertainty, which is something else than risk, and which is dealt with in very different ways by different people."

Are we really worried about how to quantify art as a social benefit? We built these organismic enigmas and the instrument, the Errorarium, for public participation and experience of cutting edge biology. This is an introduction into the real present structure of breeding research utilizing experiential and hands-on citizen science. It can surely be shown to be beneficial qualitatively (see Qualitative proof of Errorarium benefits, Example A, below). The real question of risk put aside, we have to emphasis that this is public education into the ethics, legal and social implications of new technology pertaining to genetic enhancement of photosynthetic ability in living being. In this case, we also happened to make a novel GM Art organism that is unlike any made by science up to this point (either in itself or technically). It is an original plant, novel and capable of uncovering new knowledge if that were the intention.
- Qualitative data of conceptually proving Errorarium benefits, Example A

- Qualitative data of conceptually proving Errorarium benefits, Example B
Qualitative data of conceptually proving Errorarium benefits, Example C
Excerpt from Appendix 3 – Field Notes :: Ethnographer/Doctoral Student, David Louwrier

Publieks reacties op LLowlab 2012, na de mogelijkheid om zebravisembryos te injecteren.

“We vonden het leuk om te doen, en erg leerzaam, al begrijpen we nog niet volledig hoe het werkt. En wat er in de “geluidbak”gebeurt.
Puck&Bobby”

“When Adam injected the cockroach and I watched it convulse slowly into death, I found that disturbing. Eh!”

“Voor een vakblad (bionieuws) zou ik graag wat extra info willen. Zou je contact kunnen opnemen met hiddeboersma@wetenschapsjournalist.nl’

“Leuke ervaring om aan de wetenschap te hebben deelgenomen. Mooi om te werken met deze microscopische technieken.”

“ Fantastisch project. It makes you think about the World around you.”

“Ik voel me fucking doofenschmirtz ZEBRAVISSINATORRr”

“Supergaaf! Voel me net een vissen god : ) “

“Hoe is het met je vis?”

“Ik hoop dat ik het zebravisje niet doodgestoken heb…Was leuk om eens te doen!”

“Leuk om een keer gedaan te hebben!”

“Bijzonder interessant project erg inventief om vissen van de zon te laten leven. Ik ben be- nieuwd of het experiment echt gaat lukken en de visjes en de blauwalg samen 1 organisme worden.

For the full results see Appendix 3 in the Appendices.

The aim of the exhibition is to inspire the audience and provide concrete contribution to environmental and social justice issues. The mini-ecosystem is part of this and offers visitors the opportunity to environmentally tweak GMOs to see and learn about contemporary research outside the laboratory context. Our preliminary qualitative results show that the public wants to touch and wants to irrigate and wants to tweak dials and wants to experiment with rather disruptive audio and photonic (light) variables applied to GMOs, when given the chance? How to interpret this soft data set in terms of the potential for environmental and social justice as well as respect for non-humans and human produced mutant beings (including transgenic humans and non-humans alike) it up for interpretation.
8. ARTISTIC RESPONSE: This is just big government dragging its big feet without any political agenda, just slow, legally blonde and indecisive?

If this is just big government dragging big feet without a political agenda then please feel free to state that. It is the least paranoid and easiest out if one is looking to draft a non-binding, noncommittal response, I would choose this. If this and the other responses are all found wanting, that means that a decisive and well-explained response should be on its way.

1. MINISTRY RESPONSE: Design issue changes from the original containment plan in the permit

Did these issues come up in the debate about this permit? In particular, do the seven day old zebrafish embryos need to be brought back to the lab at Leiden University to be euthanized and disposed of or can the animal byproducts be sacrificed and given preorganismic rites/garbage on-site at the GEM? (This can still be arranged through the triple containment throughput.)

If these issues were discussed, can you tell us how they were resolved?

Would you share with us the reasoning behind the decision made on this important issue?

2. MINISTRY RESPONSE: The risk of the novelty plant to the environment

Why is this plant safe or not safe for release into the environment?

How is this assessment made?

Did these issues come up in the debate about this permit?

If these issues were discussed, can you tell us how they were resolved?

How was this plant risk assessed?

Would you share with us the reasoning behind the decision made on this important issue?

3. MINISTRY RESPONSE: The animal byproduct embryos (parent animal care and sacrificial disposal)

Did these issues come up in the debate about this permit? We had heard that there was some worry about the legal definition of a zebrafish changing due to publicity around when embryos officially become whole organisms. Was this a debate factor?

If these issues were discussed, can you tell us how they were resolved?

Would you share with us the reasoning behind the decision made on this important issue?

4. MINISTRY RESPONSE: The difficult political stance of my presentation at the SUPER-PLANTs symposium

Did these issues come up in the debate about this permit?

Were the concepts of fish transplant or green napalm allowed to color your decisions on permission?

If these issues were discussed, can you tell us how they were resolved?

Would you share with us the reasoning behind the decision made on this important issue?
5. **MINISTRY RESPONSE:** The Occupy Monsanto movement and continued resistance to GMOs in the EU and other global estates abroad.

Did these issues come up in the debate about this permit?  
If these issues were discussed, can you tell us how they were resolved?  
Would you share with us the reasoning behind the decision made on this important issue?

6. **MINISTRY RESPONSE:** The Biosolar Cells consortium corporate partners, managers or other interested parties blocking Ministry approval of permits not deemed industrial enough, aesthetically.

Did these issues come up in the debate about this permit?  
If these issues were discussed, can you tell us how they were resolved?  
Would you share with us the reasoning behind the decision made on this important issue?

7. **MINISTRY RESPONSE:** Inability to do a risk benefit analysis on an artwork due to the qualitative nature of the data set pertaining to art.

Why is this plant safe or not safe for release into the environment? How is this assessment made?

Did these issues come up in the debate about this permit?  
If these issues were discussed, can you tell us how they were resolved?  
Would you share with us the reasoning behind the decision made on this important issue?

8. Is this just big government dragging its big feet without any political agenda, just slow, legally blonde and indecisive?

Did these self-reflexive issues come up in the debate about this permit?  
If these issues were discussed, can you tell us how they were resolved?  
Would you share with us the psycho-social impetus behind the decision made on this important issue?

For now we must go public with our requests for the Ministry Office of Genetically Modified Organisms (GMO Office http://bggo.rivm.nl) and the other Ministry Officials Involved... Environment, Agriculture, etc. to take a stand on the issue of the permit, as exhibition time is running short. In any case, could you please address each of these eight scenarios and at least let us know if these issues came up in debate or are erroneous hearsay... and if these issues were covered, can you tell us how they were resolved and in particular, the reasoning behind the decisions (as above)? What follows is a list of links and a report on my first two years research at the artist embedded in BioSolar Cells.

Best Regards,

[Signature]

Adam Zaretsky
List of links for additional information:

Public microinjection Lab at Llowlabs Clear Channel Event:
http://www.youtube.com/watch?v=pE8YnjEB9mY&feature=related

GM Zinc Fingers Art Plant Production:
http://www.youtube.com/watch?v=l0L5hQjJZ6o

Errorarium, Audio Visual Art Testing of engineered life:
http://www.youtube.com/watch?v=8g1Xlpbl_rk

Adam Zaretsky interview with Dr. Ir. Bert van der Zaal On whole genome reprogramming:
http://www.youtube.com/watch?v=mgvmvS0nEaQ

Public Speech on mutation and aesthetics with Artists and Scientists:
http://www.youtube.com/watch?v=jbJqzTz-XD4
http://archive.org/details/ArtAndGeneActionPathwaysToExpression-TranshumanistPosition
http://www.youtube.com/watch?v=fDVPd-dulBA
http://www.youtube.com/watch?v=9KmCJDtN9qE&list=PLBD5A960E65AF742E&index=6

Zaretsky @ SUPERPLANTS:
http://www.youtube.com/watch?v=6LrJ2UBxM6E

BSE:
http://vimeo.com/18748540