



MATRICS

NEWSLETTER 2 – HOLIDAY EDITION 2016

Happy Holidays

Dear readers,

Welcome to the Holiday Edition of the MATRICS newsletter. We are wishing all of you, your families and loved ones happy holidays and all the best for the New Year in 2017!

As the year draws to a close, this is often a time to reflect on achievements and experiences of the passing year. To spend time with friends and family. To enjoy good food and drinks. And soon enough, the New Year will be here. A clean slate for new plans, new ideas, fresh energy and lots of enthusiasm.

In this spirit, this will not be a regular MATRICS newsletter, but instead, will

reflect on what happened in MATRICS in 2016 and highlight what we know to be coming up in 2017.

We hope you will be able to take some time off to recharge your batteries over the holidays. Maybe you will even try one of the seasonal recipes contributed by the junior group!

Best wishes,
Jeffrey Glennon, Christiana Labermaier & Sarah Baumeister

For feedback about the newsletter or questions regarding the MATRICS project please contact info@matrics-project.eu



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Looking back: Highlights of 2016

TEXT: SARAH BAUMEISTER & CHRISTIANA LABERMAIER

MATRICS 3rd General Assembly

The General Assembly meets once a year to present and discuss the results that have been achieved so far, and to determine and discuss the next steps within the MATRICS project. The 2016 meeting was held in Mallorca on April 14th – 16th and was attended by representatives of all MATRICS partners, as well as Dr. Luna Centifanti (Universities of Durham / Liverpool) as an invited guest speaker.



MATRICS General Assembly Mallorca

MATRICS Steering Committee Meeting

The Steering Committee meets twice a year: once on the occasion of General Assembly meetings, and once more after six months to review the project's progress. The 6th SC meeting was held in Berlin, Germany on October 19th – 20th.



MATRICS Steering Committee Meeting Berlin

EFCAP Symposium in Porto

The MATRICS project was represented by 2 symposia (*"Towards a translational approach of disruptive behavior disorders?"* and *"Multidisciplinary therapeutic and institutional approaches for adolescents with disruptive behavior disorders"*) at the 5th EFCAP congress in Porto this year.

The meeting's main focus was the mental health needs of young offenders and victims. The congress provided new insight into assessment procedures, intervention strategies and programs and legal issues related to mental health problems of both young offenders and victims. The MATRICS project fitted extremely well into this year's program and furthermore enabled us to disseminate our findings within the scientific community. In addition, the EFCAP board has asked us to prepare a white paper on how our output can impact on CD. We have also suggested that we join the EFCAP scientific advisory board.

Early Career Scientist Workshop in Nijmegen

During a 2-day workshop on aggression, 40 early career scientists (ECS) from the four aggression-related, EU-funded projects (Action, Aggrosotype, FemNAT CD and MATRICS) met in Nijmegen, Netherlands October 31st – November 1st. This was the first time, the ECS met in person, and had the chance to attend state-of-the-art lectures on aggression, present and discuss their own work, as well as potential collaborations and dissemination strategies.



Early Career Scientist Workshop Nijmegen

Looking back: Highlights of 2016

TEXT: THOMAS WAGNER & SARAH BAUMEISTER



MATRICS account

Twitter

We are very happy to announce that MATRICS now has its own twitter account:

https://twitter.com/MATRICS_EU.

We would like to remind you that we need your input and ideas to build up and maintain our Twitter account. What kind of content are we looking for? Basically anything related to your research project and behavioral disorders in general. This includes:

- ❄ Your research activities: Meetings, pictures, on-site impressions.
- ❄ Interesting papers: This can be your own as well as other scientists' work. While we only want to post good research, you don't necessarily have to agree with the results presented.
- ❄ Controversy might spark some discussions and thus increase activity on the account.
- ❄ Scientific articles: Anything from popular science to professional journals.
- ❄ Trivia/entertainment: Artwork, comics, music, films etc...

Please send your suggestions to

thomas.wagner@concentris.de with the subject „MATRICS Twitter“.



1st Early Career Scientist Award goes to Dr. Kate Lievesley

The MATRICS project will be giving away an “Early Career Scientist Award” to pay tribute to the talented young

researchers within the consortium.

The first ECS Award will be dedicated to Dr. Kate Lievesley at the Department of Child and Adolescent Psychiatry of the Institute of Psychiatry at King's College London.

Kate is a highly enthusiastic and energetic young researcher who has been a tremendous help supporting a difficult ethics review process in London. In addition, her discipline and well-structured work have aided much in keeping an overview over ongoing recruitment goals.

We are very sorry that Kate has left the MATRICS project as per December 1st 2016. We congratulate her on her award and wish her good luck with her future endeavors!

Looking back: Research findings of 2016

ANIMAL MODELS OF AGGRESSION

Carmen Sandi's team – Brain Mind Institute, EPFL, Lausanne, Switzerland

In collaboration with Diana Cash and Steve Williams from KCL we have identified critical alterations in brain microstructure in the subset of animals presenting enhanced vulnerability to develop pathological aggression following exposure to stress during the peripubertal period. Such alterations were predominantly observed in the hippocampus, prefrontal cortex, and amygdala.

Jeffrey Glennon's team – Radboud University Medical Centre, Nijmegen, Netherlands

Our work in 2016 has been to link GABAergic deficits in the anterior cingulate cortex in BALB/cJ mice that show aggression and inattention. This has been confirmed by changes in mRNA expression of KCC2 and NLGN2 (associated with GABAergic signaling). In addition, we established that BALB/cJ mice learn less well in a reversal learning task associated with punishment.

Giovanni Laviola's team – Istituto Superiore di Sanità, Rome, Italy

Our activities within 2016 have been devoted to a further characterization of an experimental animal model developed in the previous year. The latter is based on the identification of subsets of mice expressing low vs high levels of empathy. This model rests upon the hypothesis that a lack of empathy may be associated with conduct disorder (CD). Lack of empathy in mice can be defined as a dramatic reduction in interest for the pain exhibited by a closely related conspecific. In the previous study, we observed that these "callous" mice showed

remarkable behavioural and neuroendocrine alterations. Thus, during last year, we investigated in this experimental model the potential modulatory effects of oxytocin (a compound that has been proposed as a potential therapy for CD). We observed that oxytocin normalises the lack of empathy exhibited by "callous" mice. We are currently evaluating whether oxytocin may also normalise the other behavioural alterations observed in these individuals, with a particular focus on aggressive-related phenotypes. The latter will be analysed through a detailed scoring of aggressive behaviour in a resident-intruder paradigm.

Greg Prescott – Campden Instruments, Leicester, UK

A prototype gate and segregation system for mice has been successfully tested. Further efforts will be dedicated to rearrangement of gates and arenas in order to construct the instrumental aggression task.

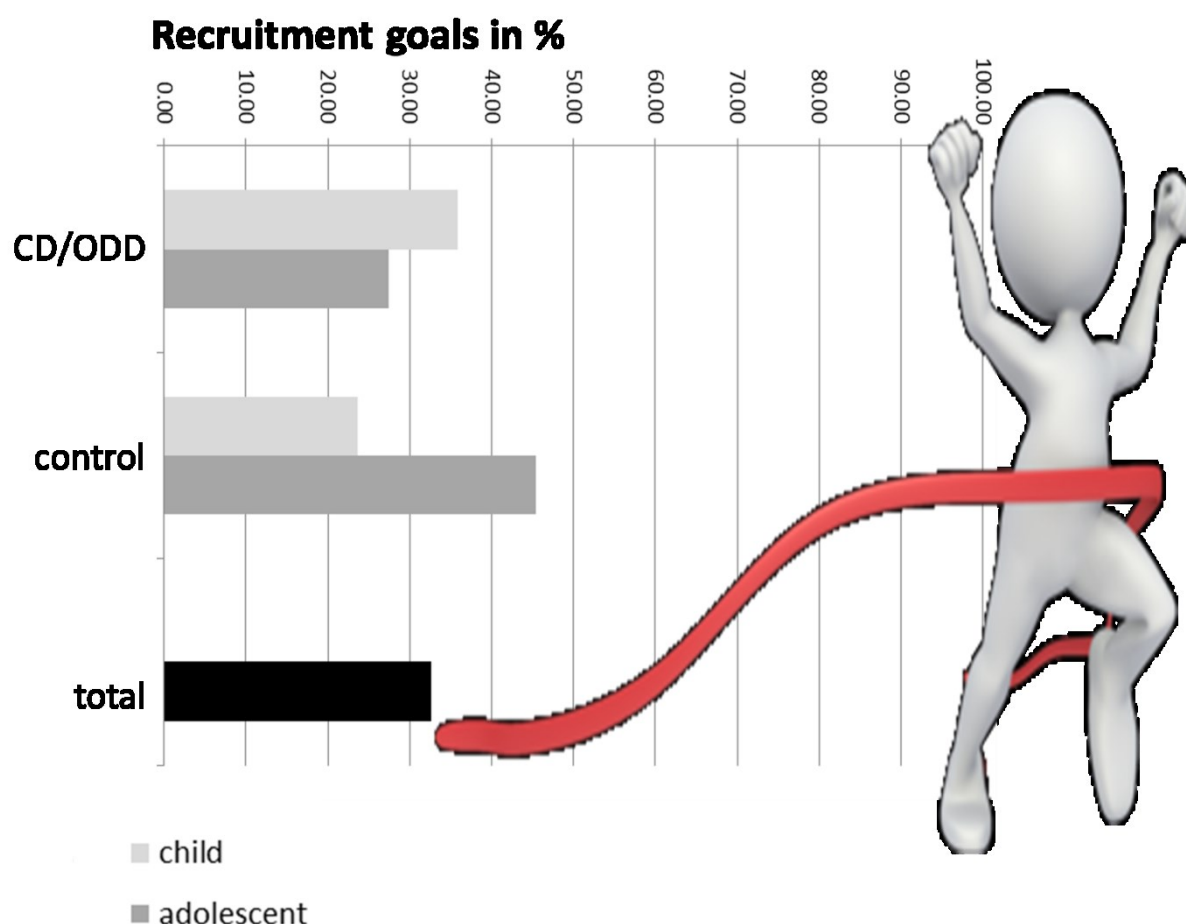
Trial Prototype



Looking back: Research findings of 2016

HUMAN RESEARCH

In 2016, collecting a new cohort of children and adolescents with clinical levels of aggression along with typically developing controls has been one of the priorities of human research within the MATRICS project. As of December 13th, 60 young patients with conduct disorder (CD) or oppositional defiant disorder (ODD) and 38 controls have been included and data collection is ongoing. This new dataset shall help to shed light on the genetic, neurophysiological and psychological characteristics of youth growing up with conduct disorder and help identify subtypes of aggression.



The biofeedback and neurofeedback treatment studies for young patients with aggressive behavior have been launched and are currently ongoing. These studies investigate bio- and neurofeedback as novel, non-pharmacological and individualized treatment approaches for aggression and conduct disorder.

The pharmacological treatment studies are intended to start in January 2017 and will investigate the treatment with two novel medication choices: oxytocin and clonidine. Furthermore, within the human cohort study ALSPAC we have been investigating pre- and perinatal risk factors associated with conduct problems.

Looking back: 2016 in numbers*

* AS OF DECEMBER 13TH 2016

22 papers
published

98 participants
included in
new cohort

28 hours spent
in TC's

19 participants
in MATRICS
SC meeting

41 participants
in MATRICS
GA meeting

2 MATRICS
symposia

1st collaborative early
career scientists
workshop with

12 followers
on twitter

7 MATRICS
presentations

76% milestones
achieved

87% deliverables
achieved

Looking ahead: coming up in 2017

TEXT: SARAH BAUMEISTER & CHRISTIANA LABERMAIER

MATRICS 4th General Assembly

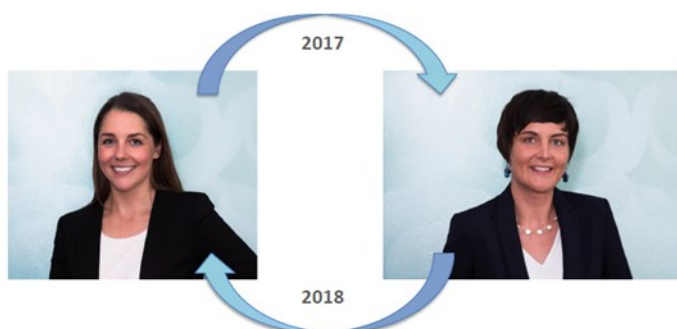
The 2017 MATRICS GA meeting will be held from 24th – 26th of April. The idea is to start the meeting with a juniors workshop, which will be held on 24.04.2017. The ECS are currently working on a program. The day will close with a welcome dinner for all MATRICS GA members. The main MATRICS GA meeting will be held on 25th and 26th. The meeting will close with a farewell lunch on 26.04.2017. Ina is currently looking into locations, and the place will be announced shortly.

MATRICS 8th SC Meeting

For all SC members please sign in the doodle (<http://doodle.com/poll/tquv9stkmggvxbdd>) to find the most suitable date for the next SC meeting. The meeting will be held in the UK but we did not decide on the exact location yet.

Christiana on maternity leave

We would like to inform all of you that Christiana will be on maternity leave from January 20th 2017 on. Andrea Wohner (andrea.wohner@concentris.de) will take over the MATRICS project during this period and will make sure that the project will go well during Christiana's absence.



ECNP Symposium in Paris

We are proud to announce that the MATRICS project will be represented with a symposium (*"Aggression in conduct disorder is associated with altered top-down cortical processing mechanisms: a translational perspective"*) at the 20th ECNP congress on September 2nd – 5th in Paris next year.

Special issue: Neuroscience and Biobehavioral Reviews

We are happy to note that the MATRICS project will be represented with at least 9 contributions to a special issue on conduct disorders in Neuroscience and Biobehavioral Reviews.

Special issue: European Child and Adolescent Psychiatry

We are happy to note that the MATRICS project will be represented with at least 2 contributions to a special issue on aggressive behavior in European Child and Adolescent Psychiatry. It is also still possible to submit clinical papers for this special issue.

Upcoming conferences in the field of Psychiatry



Treat yourself: seasonal recipes

WHITE WINTER PUNCH

GERMANY

BY SARAH BAUMEISTER

Ingredients:

- * 1 bottle of white wine
- * 250 ml orange juice
- * 40 ml elderflower syrup
- * 1 cinnamon stick
- * 6 cloves
- * orange zest to taste

Optional:

- * 60 ml cointreau
- * sugar to taste

In a medium saucepan over medium heat, combine the orange juice, elderflower syrup, cinnamon, cloves and orange zest and bring to a simmer. Cook for 5-10 minutes. Add wine and cointreau, continue to simmer for 5 more minutes (do not allow to boil) and let stand for 20 minutes to mull. Taste and add sugar if necessary. With a slotted spoon, remove and discard the cinnamon sticks, cloves, and orange zest.

Just before serving, gently reheat mulled wine over medium heat until just beginning to simmer. Serve warm.

VIN CHAUD

FRANCE / SWITZERLAND

BY DAMIEN HUZARD

Ingredients:

- * 4 bottles of red wine (A)
- * 300gr of sugar (A)
- * 15-20gr of cannella sticks (A)
- * 175gr of honey (A)
- * 5cl of lemon (A)
- * 1 bottle of porto (B)
- * 1dl of Kirsch (B)

Recipe:

- * Mix (A) in a pot
- * Cook 15 minutes
- * Add (B)
- * Let it get cold
- * Filter
- * Let rest for 24h
- * To serve: warm it + ½ slice of orange in each glass

Treat yourself: seasonal recipes

CHOCOLATE BISCUITS

GERMANY
BY SARAH BAUMEISTER



Ingredients (makes 126):

- * 250 g whole Hazelnuts
- * 250 g flour
- * 40 g cocoa powder
- * 2 teaspoons baking powder
- * 250 g butter
- * 250 g sugar
- * 1 egg
- * 1 pinch of salt
- * 1 vanilla bean
- * 50 g pistachio
- * 200 g nougat

Grind hazelnuts. Spread flour on work surface and create a depression in the middle. Sift cocoa powder to the rim of the depression. Spread ground nuts and baking powder on the rim. Place butter, sugar, egg, salt and seeds of vanilla bean into the depression. Work into a dough starting in the middle. Part dough into 7 equal pieces and create a 30 cm long roll from each piece. Chill for 1-1.5 hours. Line baking sheets with baking paper. Roughly chop pistachios. Cut every roll of dough into 18 pieces and create a ball from every piece. Place balls of dough appr. 2 cm apart on baking sheet and press on surface to create an impression. Bake in pre-heated oven at 175° on middle rack for about 15 minutes. Let biscuits cool down. Slightly heat nougat and put into a piping bag with small opening. Pipe some Nougat on every biscuit and sprinkle with pistachios.

CINNAMON STARS

GERMANY
BY CHRISTIANA LABERMAIER



Ingredients:

- * 2 2/3 cups finely ground almonds
- * 1 tablespoon ground cinnamon
- * 1 teaspoon lemon zest
- * 1/3 cup egg whites
- * 1/8 teaspoon salt
- * 2 1/2 cups confectioners' sugar
- * 1 3/4 teaspoons lemon juice

Recipe:

- * Stir together the almonds, cinnamon, and lemon zest until combined.
- * Beat the egg whites and salt until soft peaks form. Slowly sift in the confectioner's sugar, continuing to beat until the mixture is stiff. Set aside 1/3 cup of the egg white mixture for the glaze. Fold in the almond mixture.
- * Preheat oven to 325 degrees F (170 degrees C). Line the cookie sheets with parchment paper.
- * Roll the dough to 1/4 inch thickness on a surface that has been sprinkled with confectioners' sugar. Using a 2 1/2-inch star cookie cutter, cut out the cookies and place them on the cookie sheets.
- * To make the glaze, add the lemon juice to the reserved egg white mixture, stirring until smooth. Brush the tops of the cookies lightly with the glaze. (If the glaze starts to thicken, add a few more drops of lemon juice.)
- * Bake for 20 to 25 minutes. When done, they will be light brown and soft in the center. Remove and cool on wire racks.

Treat yourself: seasonal recipes

GUBANA – CHRISTMAS BREAD/CAKE

FRIULI, ITALY

BY FRANCESCA ZORATTO

The "Gubana" is indigenous to the Natisone Valleys in the North-East of Italy, and it was born as a poor cake. Although nowadays it is enjoyed throughout the year, Gubana originated as a Christmas bread. It represents an important cultural heritage for the inhabitants of my territory. This cake is called "Gubana" in Italian, "Gubane" in Friulano, our minority language, and "Gubanca" in the Slovenian dialect of the Natisone Valleys.

Please find some additional information on the history of Gubana in a separate document sent with this newsletter.

Ingredients (makes 10-12 servings):

For the dough:

- * 1 ½ cups (3 sticks) unsalted butter, cold
- * 3 ¾ cups unbleached, all-purpose flour
- * 1 tablespoon active dry yeast (2 packages)
- * 1/3 cup warm water
- * 1 ½ teaspoons kosher salt
- * 1/3 cup granulated sugar
- * 1 large egg
- * 1 cup whole milk, room temperature

For the filling and assembly:

- * ½ cup golden raisins
- * ¼ cup granulated sugar
- * 2 teaspoons ground cinnamon
- * ½ teaspoon ground cloves
- * ½ teaspoon ground nutmeg
- * 1 tablespoon unsweetened cocoa powder
- * ½ cup walnut pieces
- * ½ cup sliced almonds
- * ¼ cup pine nuts
- * 3 tablespoons grappa
- * Grated zest of 1 small orange
- * 2 tablespoons unsalted butter, melted
- * 1 egg, lightly beaten with 1 tablespoon of water

Instructions:

Cut the butter into small pieces and place it in a bowl. Sprinkle with ¼ cup of the flour, and using your fingers, work the butter and flour together. The butter should remain malleable. Shape into a 4-inch square, wrap it in plastic and set it aside in a cool place, but not in the refrigerator.

In a small bowl, whisk together the yeast and warm water. Add a pinch of sugar and let the mixture sit until it is foamy. In the bowl of an electric mixer, combine 2 cups of the flour with the salt. Add the yeast mixture, sugar, egg and milk. Using the paddle, beat the ingredients until smooth. Switch to the dough hook and knead in the remaining 1 ½ cups of flour until you have a smooth, elastic dough. Place it in a greased bowl, cover with

plastic or a damp towel, and let it relax for 30-45 minutes. Roll the dough on a well-floured board into a large rectangle, about 16x 16 inches. Sprinkle with flour. Remove the square of butter and flour from the refrigerator and place it in the middle of the rectangle. Fold the left and right sides over the middle, then the top sides over that; the goal is to make a "package" of dough. Sprinkle the work surface, top of the dough and your rolling pin. Roll the dough in from the middle toward the top and bottom, making a long rectangle, maintaining the width but increasing the length. Fold the bottom upwards to the center, making a flap, and then fold the top over that, making an envelope. Turn the dough clockwise, so that the top flap faces the right; the dough should resemble a book. Once again, flour the work surface, the dough and the rolling pin, and repeat the rolling and folding process. You will end up with another "book" fold. Wrap the dough tightly in plastic and refrigerate it for at least 4 hours, or overnight.

Remove the dough from the refrigerator. If it was stored overnight, allow it to come to room temperature for about one hour before attempting to roll it. Place the almonds, walnuts, pine nuts, raisins, sugar, cocoa and spices into the bowl of a food processor and process to chop the nuts finely and thoroughly combine the mixture. Add the grappa, and orange zest and pulse to incorporate them. On a lightly floured board, roll the dough into a large rectangle, about 15 x 22 inches. Spread the filling evenly across center of the dough, leaving a 1-inch border. Roll the dough, jellyroll style, starting from the bottom, wide side. Roll the resulting long "snake" into a tight coil, and lay it into a greased 10-inch springform pan. Brush the dough with the remaining melted butter, cover it with a towel and allow it to rise until doubled, about one hour. Preheat the oven to 350 F degrees. Brush the dough with the beaten egg glaze. Bake the Gubana on the center rack for 45-50 minutes or until it is golden brown. Rotate the pan halfway through the cooking period to ensure it browns evenly. Allow the Gubana to cool for 20 minutes in the pan, then carefully remove the sides of the pan to cool it completely. To serve, slice the Gubana in wedges.



Treat yourself: seasonal recipes

CAULIFLOWER CURRY

NETHERLANDS

BY JILLY NAAIJEN



Boring Dutch veggies transformed into an exotic curry dish ☺

Ingredients (for two):

- * 1 cup of rice
- * 1 big onion, chopped
- * 1 carrot, in pieces
- * 1 small cauliflower, into little florets
- * 1 can diced tomatoes (with juice)
- * 1 tablespoon of Greek yoghurt
- * Indian or Thai curry paste (red or green)
- * Salt and pepper to taste
- * Olive oil

Preparation:

Cook the rice as shown on its package.

Heat the oil and fry the onion for about 5 minutes. Add bell-pepper, carrot and cauliflower florets and bake for a few minutes. Add the curry paste and bake for one minute. Add the diced tomatoes and juice and cook everything for 10 more minutes, while stirring every now and then.

Add salt, pepper (to your taste) and the Greek yoghurt. Serve the curry with the rice.

The MATRICS Consortium:



Kinder- und Jugend-
psychiatrie / Psychotherapie
Universitätsklinikum Ulm

