12 Early Stage Researcher Positions (for PhD studies) for MSCA-ITN Project

“CAPICE”

CAPICE: general description

In this ambitious and inspiring network, 12 Early Stage Researches (ESRs; PhD-level training) will be trained in the broad field of psychiatric genomics, investigating the role of genetics and epigenetics, and their interplay with the environment, in the development and persistence of childhood and adolescent psychopathology. Through biological pathway analyses, drug target validation and the building of prediction models, these results will ultimately be translated to the clinic. Analyses will be performed in large international collaborations, making use of the wealth of data available across a range of European birth and adolescent cohorts.

ESRs will be supervised by leaders in the field located at institutions across Europe in Italy (University of Cagliari), The Netherlands (Vrije Universiteit Amsterdam, Erasmus University Medical Center Rotterdam, University of Twente), Sweden (Karolinska Institute, Gøthenburg University, Janssen Pharmaceutical) and the UK (Imperial College London, King’s College London, University of Bristol). At the end of this project the ESRs will be part of a broad international network consisting of academic and non-academic partners.

Candidates with a background in statistical genetics, bioinformatics, psychology, psychiatry or neuroscience are invited to apply.
Vrije Universiteit Amsterdam, department of biological psychology, invites applications for two Early Stage Researcher (ESR) Fellowships for PhD studies funded as part of the Marie Curie European Training Networks, under the European Commission’s H2020 Framework Programme.

The recruited ESRs will join the CAPICE project: “Childhood and Adolescence Psychopathology: unravelling the complex etiology by a large Interdisciplinary Collaboration in Europe” (with a 3-year Marie Curie fellowship).

A total of 12 ESRs for PhD will be hosted across this network and will be trained in the broad field of psychiatric genomics. Candidates with a background in statistical genetics, bioinformatics, psychology, psychiatry or neuroscience are invited to apply.

### Project 1: “Polygenic analyses of childhood and adolescent internalizing problems”

It is known that internalizing symptoms are partly heritable. Polygenic analyses have already shown that these traits are influenced by many genetic variants, each with a small effect. The aim of this project is to identify the common genetic variants and genes that influence the development and course of internalizing symptoms across childhood and adolescence. Another aim is to shed light on the interplay between genetic variants and other risk factors known to be related to internalizing problems, such as birth weight, parental divorce, and parental psychopathology.

Analyses will include genome-wide association meta-analyses of internalizing symptoms allowing for age-specific effects as well as effects that are stable across childhood and adolescence. Polygenic analyses, in which the joint effect of the genetic variants across the genome are investigated, will be used to unravel the interplay with other risk factors. Examples of polygenic analytic methods are polygenic risk score analyses, genetic relatedness matrix restricted maximum likelihood (GREML) and LD score regression.

### Project 2: “Polygenic analyses of comorbid symptoms during childhood”

There is frequent co-morbidity of psychiatric symptoms. This can be concurrent or over time, i.e., internalizing and externalizing symptoms can present simultaneously, but it is also possible that internalizing symptoms are preceded by externalizing symptoms. It has been suggested that this comorbidity is partly explained by genetic variants. The aim of this project is to investigate to what extent the concurrent and longitudinal comorbidity is explained by genetic factors and to identify genetic variants common to different psychiatric disorders. Another aim is to shed light on the interplay between genetic variants and other risk factors known to be related to psychiatric symptoms, such as birth weight, parental divorce, and parental psychopathology.
Analyses will include polygenic analyses, in which the joint effect of the genetic variants across the genome are investigated, to calculate the genetic correlations between psychiatric disorders. Examples of polygenic analytic methods are polygenic risk score analyses, genetic relatedness matrix restricted maximum likelihood (GREML) and LD score regression. Genome-wide association meta-analyses focusing on genetic variants that are common over disorders, allowing for age-specific effects as well as effects that are stable across childhood and adolescence will be performed. Polygenic analyses will also be carried out to unravel the interplay with other risk factors.

Requirements (for both projects):
The candidate must have a Master degree in a relevant discipline (e.g., statistics, statistical genetics, bioinformatics, psychology, psychiatry, neuroscience)
The candidate should have good knowledge of and/or interest in both childhood psychopathology and statistical genetics.

Candidates will be required to meet the Marie Skłodowska-Curie Early Stage Researcher eligibility criteria: (http://ec.europa.eu/research/mariecurieactions/). In particular, at the time of appointment candidates must have had less than four years full-time equivalent research experience and must not have already obtained a PhD. Additionally, they must not have resided in The Netherlands for more than 12 months in the three years immediately before the appointment.

Start: The ESR’s will start not later than the first of August 2017.
Type of contract: Temporary
Job status: Full-time
Allowances:
Living allowance: 3243,73 euro gross per month
Mobility allowance: 600 euro per month
Family allowance: 500 euro per month (if applicable)

Application:
Please send your CV and motivation letter to the project manager of the CAPICE project, Natascha Stroo, n.stroo@vu.nl before March 1st, 2017
Location: King’s College London, United Kingdom

Social, Genetic and Developmental Psychiatry Centre, IOPPN, King’s College London invites applications for an Early Stage Researcher (ESR) Fellowship for a PhD study funded as part of the Marie Curie European Training Networks, under the European Commission’s H2020 Framework Programme.

The recruited ESR will join the CAPICE project: “Childhood and Adolescence Psychopathology: unravelling the complex etiology by a large Interdisciplinary Collaboration in Europe” (with a 3-year Marie Curie fellowship).

A total of 12 ESRs for PhD will be hosted across this network and will be trained in the broad field of psychiatric genomics. Candidates with a background in statistical genetics, bioinformatics, psychology, psychiatry or neuroscience are invited to apply.

Project: “Genetic and environmental underpinnings of psychopathology during childhood and adolescence."

The student will be based in King’s College London and will be part of the TEDS (The Twins Early Development Study) research team (https://www.teds.ac.uk/research), supervised by Professor Robert Plomin. The student will be expected to develop high-level skills in quantitative and molecular genetic analysis. The specific aim of this project is to unravel the developmental underpinnings of childhood and adolescent psychopathology and the co-morbidity of these problems by conducting multivariate and longitudinal twin analyses. The role of gene-environment interaction in the development of childhood psychopathology will be investigated using molecular genetic methodology. Data from TEDS will be combined with data from other European birth cohorts collaborating in CAPICE.

Requirements:

We welcome applications from candidates with a good first degree in behavioral, biological or mathematical sciences. The candidate should have a keen interest in interdisciplinary research using quantitative and molecular genetics in behavioural development.

Candidates will be required to meet the Marie Skłodowska-Curie Early Stage Researcher eligibility criteria: (http://ec.europa.eu/research/mariecurieactions/). In particular, at the time of appointment candidates must have had less than four years full-time equivalent research experience and must not have already obtained a PhD. Additionally, they must not have resided in the UK for more than 12 months in the three years immediately before the appointment.
Start:  The ESR will start not later than the first of August 2017.

Type of contract:  Temporary

Job status:  Full-time

Allowances:
Living allowance:  3741.33 euro gross per month
Mobility allowance:  600 euro per month
Family allowance:  500 euro per month (if applicable)

Application:
Please send your CV and motivation letter to the project manager of the CAPICE project, Natascha Stroo, n.stroo@vu.nl before March 1st, 2017
Göteborg University invites applications for one Early Stage Researcher (ESR) Fellowship for a PhD study funded as part of the Marie Curie European Training Networks, under the European Commission’s H2020 Framework Programme.

The recruited ESR will join the project CAPICE: “Childhood and Adolescence Psychopathology: unravelling the complex etiology by a large Interdisciplinary Collaboration in Europe” (with a 4-year PhD-training, out of which a 3-year Marie Curie fellowship).

A total of 12 ESRs for PhD will be hosted across this network and will be trained in the broad field of psychiatric genomics. Candidates with a background in statistical genetics, bioinformatics, psychology, psychiatry or neuroscience are invited to apply.

**Project: “Prediction of negative life outcomes in individuals with anxiety”**

The overarching goal of this project is to develop prediction models to identify individuals with anxiety/anxiety-symptomatology that are in need of special attention with regards to high likelihood of developing negative life outcomes. In addition, the project aims to understand and depict the features that characterize the group of individuals with anxiety/anxiety-symptomatology with a high likelihood of developing negative life outcomes.

The specific aims are to (via prediction models and descriptive statistics using detailed assessments):
1. Predict common negative outcomes (e.g. mental health problems and poor school achievement) in adolescence in individuals with anxiety.
2. Predict rare negative outcomes (e.g. suicide attempts and criminality) in adolescence and early adulthood in individuals with anxiety.

The ESR will learn to work with, and combine, several types of data; surveys, national registers, and genomic. The ESR will apply standard epidemiological statistical methods (linear-, logistic-, and Cox-regression).

**Requirements (for both projects):**

The candidate must have at least a BSc in, for example, Psychology or Medicine, Speech and language therapy or other allied disciplines.

The candidate should have a good knowledge and/or interest in epidemiology and statistics.

Candidates will be required to meet the Marie Skłodowska-Curie Early Stage Researcher eligibility criteria: [http://ec.europa.eu/research/mariecurieactions/](http://ec.europa.eu/research/mariecurieactions/). In particular, at the time of appointment candidates must have had less than four years full-time equivalent research experience and must not
have already obtained a PhD. Additionally, they must not have resided in Sweden for more than 12 months in the three years immediately before the appointment.

**Start:** The ESR will start on the first of September 2017

**Type of contract:** Temporary

**Job status:** Full-time

**Allowances:**
- Living allowance: 3473.87 euro gross per month
- Mobility allowance: 600 euro per month
- Family allowance: 500 euro per month (if applicable)

**Application:**
Please send your CV and motivation letter to the project manager of the CAPICE project, Natascha Stroo, n.stroo@vu.nl before May 1st, 2017
University of Bristol invites applications for two Early Stage Researcher (ESR) Fellowships for PhD studies funded as part of the Marie Curie European Training Networks, under the European Commission’s H2020 Framework Programme. The recruited ESRs will join the CAPICE project: “Childhood and Adolescence Psychopathology: unravelling the complex etiology by a large Interdisciplinary Collaboration in Europe” (with a 3-year Marie Curie fellowship). A total of 12 ESRs for PhD will be hosted across this network and will be trained in the broad field of psychiatric genomics. Candidates with a background in statistical genetics, bioinformatics, psychology, psychiatry or neuroscience are invited to apply.

**Project 1 Lifestyle behaviours during pregnancy and offspring psychiatric outcomes: Using Mendelian randomization to infer causality.**

The aim of this project is to explore the relationships between lifestyle behaviours in the mother during pregnancy (e.g., tobacco and alcohol use) and later psychiatric outcomes in the offspring through childhood and into early adulthood. Analyses will include the development and validation of polygenic risk scores for various lifestyle behaviours (e.g., tobacco, alcohol, caffeine and cannabis use), and their application using Mendelian randomization methods to understand whether there is causal effect of these exposures on offspring psychopathology.

**Project 2 Two-step Mendelian randomization analyses of lifestyle behaviours during pregnancy and offspring psychiatric outcomes.**

The aim of this project is to conduct two-step Mendelian randomization analyses of lifestyle behaviours in the mother during pregnancy, to determine whether DNA methylation mediates the relationship between exposures in pregnancy and psychiatric outcomes in the offspring. Analyses will include epigenome-wide association analyses to explore the relationship between environmental exposures and methylation, and Mendelian randomization techniques to explore whether DNA methylation underlies the association between these exposures and offspring outcomes.

**Requirements:**

The candidates must have a Masters degree in a relevant discipline (e.g., statistics, statistical genetics, psychology), and have good knowledge and/or interest in childhood psychopathology and the impact of intrauterine exposures on these outcomes.
Candidates will be required to meet the Marie Skłodowska-Curie Early Stage Researcher eligibility criteria: (http://ec.europa.eu/research/mariecurieactions/). In particular, at the time of appointment candidates must have had less than four years full-time equivalent research experience and must not have already obtained a PhD. Additionally, they must not have resided in the UK for more than 12 months in the three years immediately before the appointment.

**Start:** The ESR’s will start not later than the first of August 2017

**Type of contract:** Temporary

**Job status:** Full-time

**Allowances:**
- Living allowance: 3741,33 euro gross per month
- Mobility allowance: 600 euro per month
- Family allowance: 500 euro per month (if applicable)

**Application:**
Please send your CV and motivation letter to the project manager of the CAPICE project, Natascha Stroo, n.stroo@vu.nl before March 1st, 2017
Location: Erasmus University, Rotterdam, The Netherlands

The Department of Child and Adolescent Psychiatry at Erasmus MC, Rotterdam, invites applications for an Early Stage Researcher (ESR) Fellowship for a PhD study funded as part of the Marie Curie European Training Networks, under the European Commission’s H2020 Framework Programme. The recruited ESR will join the CAPICE project: “Childhood and Adolescence Psychopathology: unravelling the complex etiology by a large Interdisciplinary Collaboration in Europe” (with a 3-year Marie Curie fellowship).

A total of 12 ESRs for PhD will be hosted across this network and will be trained in the broad field of psychiatric genomics. Candidates with a background in statistical genetics, bioinformatics, psychology, psychiatry or neuroscience are invited to apply.

Project “A genetic and epigenetic approach to studying the effects of lifestyle behaviors during pregnancy on offspring outcomes”

The specific aims of this project are to study the effects of lifestyle behaviors during pregnancy on offspring outcomes. Outcomes of interest include DNA methylation signatures as well as psychiatric outcomes in childhood and adolescence. In particular, the candidate will work with experts in Mendelian randomization methods and psychiatric epidemiology; information on the mentors can be found on their faculty websites [http://www.erasusmc.nl/kinderenjeugdpsychiatrie_psychol/research/onderzoeksprogramma/252717/ and http://www.erasmus-epidemiology.nl/people/profile.php?id=423#3]. The research approaches will focus on causal inference methods for informing public health and personal decision-making during pregnancy.

Analyses will be completed on the Generation R cohort (www.generationr.nl), an on-going prospective study following nearly 10,000 children prenatally through adolescence, as well as in collaboration with datasets available at other partner sites.

Requirements:
The candidate must have a Master degree in medicine, health sciences, biostatistics, or a related field. The candidate should have good knowledge and/or interest in one or more of the following: mental health, genetics, epidemiology.

Candidates will be required to meet the Marie Skłodowska-Curie Early Stage Researcher eligibility criteria: (http://ec.europa.eu/research/mariecurieactions/). In particular, at the time of appointment candidates must have had less than four years full-time equivalent research experience and must not have already obtained a PhD. Additionally, they must not have resided in the Netherlands for more than 12 months in the three years immediately before the appointment.
**Start:**
The ESR will start not later than the first of August 2017.

**Type of contract:**
Temporary

**Job status:**
Full-time

**Allowances:**
- Living allowance: 3243.73 euro gross per month
- Mobility allowance: 600 euro per month
- Family allowance: 500 euro per month (if applicable)

**Application:**
Please send your CV and motivation letter to the project manager of the CAPICE project, Natascha Stroo, n.stroo@vu.nl before March 1st, 2017
Location: Karolinska Institutet, Stockholm, Sweden

Karolinska Institutet invites applications for one Early Stage Researcher (ESR) Fellowship for a PhD study funded as part of the Marie Curie European Training Networks, under the European Commission’s H2020 Framework Programme. The recruited ESR will join the project CAPICE: “Childhood and Adolescence Psychopathology: unravelling the complex etiology by a large Interdisciplinary Collaboration in Europe” (with a 4-year PhD-training, out of which a 3-year Marie Curie fellowship). A total of 12 ESRs for PhD will be hosted across this network and will be trained in the broad field of psychiatric genomics. Candidates with a background in statistical genetics, bioinformatics, psychology, psychiatry or neuroscience are invited to apply.

Project “Prediction of negative life outcomes in ADHD”

The overarching goal of this project is to develop prediction models to identify the individuals with ADHD/ADHD-symptomatology in need for special attention as well as understand the features that characterize the group of individuals with ADHD with high likelihood of developing negative outcomes. The specific aims are to apply machine learning techniques using detailed assessments of predictors and outcomes to:

1. Predict common negative outcomes (e.g. mental health problems and poor school achievement) in adolescence in individuals with ADHD.
2. Predict rare and severe negative outcomes (e.g. suicide attempts and criminality) in adolescence and early adulthood in individuals with ADHD.

The ESR will learn to work with, and combine, several types of data; surveys, national registers, and genomic. The ESR will apply standard epidemiological statistical methods (linear-, logistic-, and Cox-regression) as well as machine learning techniques such as classification trees, support vector machines, and Naïve Bayes classifiers.

Requirements:

The candidate must have at least a BSc in, for example, Mathematics, Statistics, Computational Science, Psychology, or in other areas of Medicine and allied disciplines. The candidate should have a good knowledge and/or interest in epidemiology and statistics.

Candidates will be required to meet the Marie Skłodowska-Curie Early Stage Researcher eligibility criteria: (http://ec.europa.eu/research/mariecurieactions/). In particular, at the time of appointment candidates must have had less than four years full-time equivalent research experience and must not
have already obtained a PhD. Additionally, they must not have resided in Sweden for more than 12 months in the three years immediately before the appointment.

**Start:**
The ESR will start on the first of September 2017.

**Type of contract:**
Temporary

**Job status:**
Full-time

**Allowances:**
- Living allowance: 3473.87 euro gross per month
- Mobility allowance: 600 euro per month
- Family allowance: 500 euro per month (if applicable)

**Application:**
Please send your CV and motivation letter to the project manager of the CAPICE project, Natascha Stroo, n.stroo@vu.nl before May 1st, 2017
The University of Twente invites applications for an Early Stage Researcher (ESR) Fellowship for a PhD study funded as part of the Marie Curie European Training Networks, under the European Commission’s H2020 Framework Programme. The recruited ESR will join the CAPICE project: “Childhood and Adolescence Psychopathology: unravelling the complex etiology by a large Interdisciplinary Collaboration in Europe” (with a 3-year Marie Curie fellowship). A total of 12 ESRs for PhD will be hosted across this network and will be trained in the broad field of psychiatric genomics. Candidates with a background in statistical genetics, bioinformatics, psychology, psychiatry or neuroscience are invited to apply.

Project “Gene-environment interaction using harmonized phenotypes”
The CAPICE projects uses data that were gathered using different questionnaires to assess psychopathology. To optimally combine all available assessments, one of specific aims of this project is to harmonize these phenotypic data within cohorts and within age groups. The next aim is to elucidate the complex interplay of genetic liability and environmental factors in causing childhood psychopathology, using these harmonized scores. Analyses will include item-response theory (IRT) psychometric analyses and test linking to harmonize the phenotypic data, and quantitative genetic modelling to study gene-environment interaction.

Requirements:
The candidate must have a Master degree in one of the behavioural sciences or applied statistics. The candidate should have a good background in statistics and an interest in psychometrics/educational measurement.

Candidates will be required to meet the Marie Skłodowska-Curie Early Stage Researcher eligibility criteria: (http://ec.europa.eu/research/mariecurieactions/). In particular, at the time of appointment candidates must have had less than four years full-time equivalent research experience and must not have already obtained a PhD. Additionally, they must not have resided in The Netherlands for more than 12 months in the three years immediately before the appointment.

Start: The ESR will start not later than the first of August 2017.
Type of contract: Temporary
Job status: Full-time
Allowances:
Living allowance: 3243.73 euro gross per month
Mobility allowance: 600 euro per month
Family allowance: 500 euro per month (if applicable)

Application:
Please send your CV and motivation letter to the project manager of the CAPICE project, Natascha Stroo, n.stroo@vu.nl before March 1st, 2017
UNIVERSITY OF CAGLIARI invites applications for one Early Stage Researcher (ESR) Fellowship for a PhD study funded as part of the Marie Curie European Training Networks, under the European Commission’s H2020 Framework Programme.

The recruited ESR will join the CAPICE project: “Childhood and Adolescence Psychopathology: unravelling the complex etiology by a large Interdisciplinary Collaboration in Europe” (with a 3-year Marie Curie fellowship).

A total of 12 ESRs for PhD will be hosted across this network and will be trained in the broad field of psychiatric genomics. Candidates with a background in statistical genetics, bioinformatics, psychology, psychiatry or neuroscience are invited to apply.

**Project “Building a sustainable facility for multi-site analyses and translating the results to the clinic”**

There has been a clear shift from researchers conducting studies in their own labs to large-scale collaborative studies in consortia. This will remain the rule in (epi)genetics as well as in other kind of analyses. To perform these multi-site analyses most efficiently, the aim is to build a facility that allows analyzing all data available over sites without necessarily having access to the raw data. Another aim is to summarize the results of (epi)genetic and transcriptomic analyses, obtained both in CAPICE and other projects, and explaining the relevance of these findings to the clinic.

**Requirements:**

The candidate must have a Master degree in in Medical Science, psychiatry, psychology, biochemistry, bioinformatics. The candidate should further be able to work independently, with strong organizational and time management skills and have good communication skills. Experience with/ interest in dissemination of results to a broad audience is required. A basic level of Italian language will be appreciated.

Candidates will be required to meet the Marie Skłodowska-Curie Early Stage Researcher eligibility criteria: [http://ec.europa.eu/research/mariecurieactions/](http://ec.europa.eu/research/mariecurieactions/). In particular, at the time of appointment candidates must have had less than four years full-time equivalent research experience and must not have already obtained a PhD. Additionally, they must not have resided in Italy for more than 12 months in the three years immediately before the appointment.
Start: The ESR will start on the first of September 2017.

Type of contract: Temporary

Job status: Full-time

Allowances:
Living allowance: 3318.37 euro gross per month
Mobility allowance: 600 euro per month
Family allowance: 500 euro per month (if applicable)

Application:
Please send your CV and motivation letter to the project manager of the CAPICE project, Natascha Stroo, n.stroo@vu.nl before March 1st, 2017.
Imperial College London invites applications for an Early Stage Researcher (ESR) Fellowship for a PhD study funded as part of the Marie Curie European Training Networks, under the European Commission’s H2020 Framework Programme.

The recruited ESR will join the CAPICE project: “Childhood and Adolescence Psychopathology: unravelling the complex etiology by a large Interdisciplinary Collaboration in Europe” (with a 3-year Marie Curie fellowship).

A total of 12 ESRs for PhD will be hosted across this network and will be trained in the broad field of psychiatric genomics. Candidates with a background in statistical genetics, bioinformatics, psychology, psychiatry or neuroscience are invited to apply.

**Project: Analytical methods for bio-behavioural sciences - polygenic analyses of childhood and adolescent ADHD symptoms**

It is known that ADHD and related traits are highly heritable. Polygenic analyses have already shown that these traits are influenced by many genetic variants, each with a small effect size. The aim of this project is to identify the common genetic variants and genes that influence the development and course of ADHD symptoms across childhood and adolescence. Another aim is to shed light on the interplay between genetic variants and other risk factors known to be related to internalizing problems, such as birth weight and other growth measures, parental divorce, parental psychopathology. Methods will be developed to analyze the multidimensional data in the most optimal way. Analyses will include, for example, spline regression models and generalized additive models, (robust regression), hierarchical regression and regression models for multiple outcomes, all of these (potentially) in a Bayesian framework. Polygenic risk score approaches will be further tested and assessed for feasibility in the present project.

**Requirements:**

The candidate must have a Master in Science degree in mathematical sciences (biostatistics).

The candidate should have a good knowledge in statistical analyses and interest in methods development and testing.

Candidates will be required to meet the Marie Skłodowska-Curie Early Stage Researcher eligibility criteria: [http://ec.europa.eu/research/mariecurieactions/](http://ec.europa.eu/research/mariecurieactions/). In particular, at the time of appointment candidates must have had less than four years full-time equivalent research experience and must not have already obtained a PhD. Additionally, they must not have resided in the UK for more than 12 months in the three years immediately before the appointment.
Start: The ESR will start not later than the first of August 2017.

Type of contract: Temporary

Job status: Full-time

Allowances:
Living allowance: 3741.33 euro gross per month
Mobility allowance: 600 euro per month
Family allowance: 500 euro per month (if applicable)

Application:
Please send your CV and motivation letter to the project manager of the CAPICE project, Natascha Stroo, n.stroo@vu.nl before March 1st, 2017
Location: Janssen Pharmaceuticals, Stockholm, Sweden
(in cooperation with Karolinska Institutet)

Janssen Pharmaceuticals and Karolinska Institutet invite applications for one Early Stage Researcher (ESR) Fellowship for a PhD study funded as part of the Marie Curie European Training Networks, under the European Commission’s H2020 Framework Programme. The recruited ESR will join the project CAPICE: “Childhood and Adolescence Psychopathology: unravelling the complex etiology by a large Interdisciplinary Collaboration in Europe” (with a 4-year PhD-training, out of which a 3-year Marie Curie fellowship).

A total of 12 ESRs for PhD will be hosted across this network and will be trained in the broad field of psychiatric genomics. Candidates with a background in statistical genetics, bioinformatics, psychology, psychiatry or neuroscience are invited to apply.

Project “Biological pathways for drug target validation in mood disorders”

The Neuroscience Therapeutic Area at Janssen Research & Development is committed to the discovery and development of novel therapeutics for mood disorders. Because these mood disorders are heritable, a promising approach for identifying potential molecular targets for new treatments involves elucidation of the genetic risk and resilience factors that influence the pathogenesis of these conditions. The ultimate aim of the project is clinical translation, through biological pathway analyses, drug target validation and predictive modeling. The CAPICE consortium data provide a unique opportunity for these analyses and modeling.

The specific aims of this project are to provide insights into the molecular genetic pathways by:

1. Identifying common genetic variants influencing stability in internalizing mental health symptoms during childhood and adolescence.
2. Investigating interactions between the genetic/epigenetic and environmental factors that influence the development and persistence of childhood and adolescent mood disorders.
3. Developing prediction models to describe how variation contributes to the risk for developing mood disorders.

To be able to easily perform analyses across the multiple sites of the consortium, the ESR will be involved in the creation of a database facility that allows analyzing all data available over sites without necessarily having access to the raw data. Moreover, the ESR will learn to work with, and combine, several types of data; surveys, national registers, and genomic. The ESR will apply standard epidemiological statistical methods (linear-, logistic-, and Cox-regression) as well as machine learning techniques such as classification trees, support vector machines, and Naive Bayes classifiers.
**Requirements:**
The candidate must have at least a BSc in, for example, Mathematics, Statistics, Computational Science, Bioinformatics or in other areas of Biomedicine and allied disciplines. The candidate should have a good knowledge and/or interest in epidemiology and statistics.

Candidates will be required to meet the Marie Skłodowska-Curie Early Stage Researcher eligibility criteria: ([http://ec.europa.eu/research/mariecurieactions/](http://ec.europa.eu/research/mariecurieactions/)). In particular, at the time of appointment candidates must have had less than four years full-time equivalent research experience and must not have already obtained a PhD. Additionally, they must not have resided in Sweden for more than 12 months in the three years immediately before the appointment.

**Start:**
The ESR will start not later than the first of August 2017.

**Type of contract:**
Temporary

**Job status:**
Full-time

**Allowances:**
- Living allowance: 3473.87 euro gross per month
- Mobility allowance: 600 euro per month
- Family allowance: 500 euro per month (if applicable)

**Application:**
Please send your CV and motivation letter to the project manager of the CAPICE project, Natascha Stroo, [n.stroo@vu.nl](mailto:n.stroo@vu.nl) before March 1st, 2017.