

- Medlem af Region Midtjyllands uro/gynækologiske specialegruppe.

Tove Høj Hansen

- Astraia database.
- Medlem af instruksudvalg for obstetrik i Region Midtjylland.
- Medlem af perinatal audit/vest-gruppen i Region Midtjylland.

## Fertilitetsklinikken

### Klinikchef

Overlæge Helle Olesen Elbæk

### Forskningsansvarlig

Professor dr.med. Peter Humaidan  
Tlf.: 78445773  
E-mail: peter.humaidan@midt.rm.dk

### Ansatte med dr.med.-grad

Humaidan P, professor, dr.med. Aarhus Universitet

### Ansatte med ph.d.-grad

Polyzos N, adjungeret professor, ph.d. (Aarhus Universitet).

### Ansatte med anden videnskabelig grad

Mikkelsen AT, study nurse, m.sc. klinisk sygepleje.  
Povlsen BB, laboratorieleder, m.sc. embryology.

### Lektorer

Alsbjerg B, ekstern lektor, Aarhus Universitet.

### Ph.d.-studerende

Lise Thomsen  
The impact of mid-luteal progesterone on the reproductive outcome of in vitro fertilization therapy.  
Aarhus Universitet.  
Hovedvejleder: Peter Humaidan.

Louise Svenstrup

Assisteret reproduktion og den tidlige luteal fase – ovulationsinduktionens påvirkning af den endokrine profil.

Syddansk Universitet, Odense.  
Hovedvejleder: Peter Humaidan.

Thor Haahr

The microbiome of infertile couples and its effect on their reproductive outcome.

Aarhus Universitet.

Hovedvejleder: Peter Humaidan.

Medvejledere: Jørgen Skov Jensen, Niels Uldbjerg.

### Vejleder - eksterne ph.d.-studerende

Terapeutisk endometrie abradering.

Mia Steengaard Olesen, IVF Klinikken, HE Horsens.

Aarhus Universitet.

Medvejleder: Peter Humaidan.

AMOR - Acoustic Monitorering of Obstetric Risks.

Diana Kjær Thing Riknagel

Aalborg Universitet

Medvejleder: Peter Humaidan.

Celiac disease and infertility among men and women in Denmark.

Louise Bang Grode, HE Horsens.

Aarhus Universitet.

Medvejleder: Peter Humaidan.

### Præsentation af afdelingens vigtigste forskningsaktivitet

2016 startede med tiltrædelsesforelæsning ved adjungeret professor Nikos Polyzos.

Der har hele året været stort fokus samt stor aktivitet på forskningsområdet.

Der er mange projekter i gang og alle gør en kæmpe indsats og bidrager til deres gennemførelse.

I juni var vi værter/arrangører af et internationalt COP-møde.

Der er i 2016 arbejdet på at få adjungeret endnu en professor med særlig interesse for andrologi og kvalitetssikring. Et samarbejde vi forventer os meget af.

Vi arbejder fortsat på at blive Universitetsklinik og håber, at det snart lykkes.

1 overlæge er godt i gang med sin expert-uddannelse.

Der har været stor deltagelse fra forskellige faggrupper i faglige kongresser nationalt såvel som internationalt.

## Igangværende forskningsprojekter

### Forsker-initierede projekter

- Betydningen af mid-lutealt progesteron og preimplantations faktor (PIF) for opnåelse af succesfuld implantation og on-going graviditet efter IVF/ICSI-behandling.  
Thomsen L.
- Gram staining, PCR or PNA FISH analysis for detection and classification of Bacterial Vaginosis - a prospective study in a Danish IVF setting.  
Haahr T.
- Laserbehandling – en ny behandling i fertilitetsbehandling?  
Elbæk H.
- Optimizing IVF by culture in the Embryo-Scope™ time-lapse system.  
Povlsen BB.
- Substitueret fryseprotokol med GnRH-agonist, der er kontrolleret, randomiseret multicenter-studie med flere danske klinikker involveret.  
Alsbjerg B.
- Testosterone TRANSdermal gel for Poor Ovarian Responders Trial.  
**Polyzos N, Humaidan P.**
- The exogenous progesterone free luteal phase after GnRHa trigger – a randomized controlled pilot study in high-responder IVF patients.  
Humaidan P.
- The exogenous progesterone free luteal phase after GnRHa trigger – a randomized controlled pilot study in normo-responder IVF patients.  
Humaidan P.

### Publikationer

#### Artikler – Peer reviewed

- 1) Da Aw L, Zain MM, Esteves SC, **Humaidan P.**  
Persistent Mullerian Duct Syndrome: a rare entity with a rare presentation in need of multidisciplinary management.  
Int Braz J Urol 2016 Nov-Dec; 42(6): 1237-1243.
- 2) Drakopoulos P, van de Vijver A, Schutyser V, Milatovic S, Anckaert E, Schiettecatte J, Blockeel C, Camus M, Tournaye H, **Polyzos NP.**  
The effect of serum vitamin D levels on ovarian reserve markers: a prospective cross-sectional study.  
Hum Reprod 2016 Dec 6; [Epub ahead of print].
- 3) Frederiksen Y, O'Toole MS, Mehlsen MY, Hauge B, **Elbaek HO**, Zachariae R, Ingerslev HJ.  
The effect of expressive writing intervention for infertile couples: a randomized controlled trial.  
Hum Reprod 2016 Dec 21; [Epub ahead of print].
- 4) **Haahr T**, Ersboll AS, Karlsen MA, Svare J, Sneider K, Hee L, Weile LK, Ziobrowska-Bech A, Ostergaard C, Jensen JS, Helmig RB, Uldbjerg N.  
Appreciable uncertainty regarding benefits and risks in the treatment of bacterial vaginosis to prevent preterm birth.  
Acta Obstet Gynecol Scand 2016 Dec 9; [Epub ahead of print].
- 5) **Haahr T**, Ersboll AS, Karlsen MA, Svare J, Sneider K, Hee L, Weile LK, Ziobrowska-Bech A, Ostergaard C, Jensen JS, Helmig RB, Uldbjerg N.  
Treatment of bacterial vaginosis in pregnancy in order to reduce the risk of spontaneous preterm delivery - A clinical guideline.  
Acta Obstet Gynecol Scand 2016 Aug; 95(8): 850-60.
- 6) **Haahr T**, Jensen JS, **Thomsen L**, Duus L, Rygaard K, **Humaidan P.**  
Abnormal vaginal microbiota may be associated with poor reproductive outcomes: A prospective study in IVF patients.  
Hum Reprod 2016 april; 31(4): 795-803.
- 7) **Humaidan P**, Nelson SM, Devroey P, Coddington CC, Schwartz LB, Gordon K, Frattarelli JL, Tarlatzis BC, Fatemi HM, Lutjen P, Stegmann BJ.  
Ovarian hyperstimulation syndrome: review and new classification criteria for reporting in clinical trials.  
Hum Reprod 2016 Sep; 31(9): 1997-2004.
- 8) Jensen AK, Macklon KT, Fedder J, Ernst E, **Humaidan P**, Andersen CY.  
86 Successful Births and 9 Ongoing Pregnancies Worldwide in Women Transplanted with Frozen-Thawed Ovarian Tissue: Focus on Birth and Perinatal Outcome in 40 of these Children.  
J Assist Reprod Genet 2016 Dec 27; [Epub ahead of print].
- 9) Ozgur K, Bulut H, Berkkanoglu M, **Humaidan P**, Coetzee K.  
Concurrent oocyte retrieval and hysteroscopy: a novel approach in assisted

reproduction freeze-all cycles.  
Reprod Biomed Online 2016 Aug; 33(2): 206-213.

- 10) Ozgur K, **Humaidan P**, Coetzee K.  
Segmented ART - The new era in ART?  
Reprod Biol 2016 Jun; 16(2): 91-103.
- 11) **Polyzos NP**, Davis SR, Drakopoulos P, **Humaidan P**, De Geyter C, Vega AG, Martinez F, Evangelou E, van de Vijver A, Smitz J, Tournaye H, Barri P, T-TRANSPORT Investigators Group.  
Testosterone for Poor Ovarian Responders: Lessons From Ovarian Physiology.  
Reprod Sci 2016 Aug 3; [Epub ahead of print].
- 12) Yovich JL, **Alsbjerg B**, Conceicao JL, Hinchliffe PM, Keane KN.  
PIVET rFSH dosing algorithms for individualized controlled ovarian stimulation enables optimized pregnancy productivity rates and avoidance of ovarian hyperstimulation syndrome.  
Drug Des Devel Ther 2016 Aug 10; 10: 2561-2573.

### Artikler – Reviews

- 1) Engmann L, Benadiva C, **Humaidan P**.  
GnRH agonist trigger for the induction of oocyte maturation in GnRH antagonist IVF cycles: a SWOT analysis.  
Reprod Biomed Online 2016 Mar; 32(3): 274-285.

### Editorial

- 1) Poseidon Group (Patient-Oriented Strategies Encompassing Individualized Oocyte Number), Alviggi C, Andersen CY, Buhler K, Conforti A, de Placido G, Esteves SC, Fischer R, Galliano D, Polyzos NP, Sunkara SK, Ubaldi FM, **Humaidan P**.  
A new more detailed stratification of low responders to ovarian stimulation: from a poor ovarian response to a low prognosis concept.  
Fertil Steril 2016 Jun; 105(6): 1452-1453.

### Publiceret abstract

- 1) Haahr T.  
Abnormal vaginal microbiota may be associated with poor reproductive outcomes: A prospective study in IVF patients.  
J Reprod Immunol 2016 JUN; 115: 47-48.

- 2) Hubbard J, Chin W, **Humaidan P**.  
The ESPART randomized controlled trial in poor ovarian responders aligned with the Bologna criteria: a post hoc subgroup analysis according to poor ovarian response inclusion criteria.  
Fertil Steril 2016; 106(3 suppl.): e191.

### Kongresbidrag

Haahr T.  
Abnormal vaginal microbiota may be associated with poor reproductive outcomes: A prospective study in IVF patients.  
13th Congress of the International Society for Immunology of Reproduction and the European Society for Reproductive Immunology. Erfurt, Tyskland, juni 2016. (Oral præsentation).

Haahr T.  
ART and reproductive tract microbiota.  
Clinical observation program, Skive, sponsored by MSD. Skive, juni 2016. (Invited speaker).

Haahr T.  
Genital tract microbiota and its possible effect on reproductive outcomes – moving from observational to interventional trials.  
Nutrition and microbiome. Aarhus, juni 2016. (Invited speaker).

Haahr T.  
The impact of BV on IVF treatment.  
Ecovag partner symposium. København, oktober 2016. (Invited speaker).

Haahr T.  
Mikrobiom og reproduktion.  
Temaaften GO Aarhus: Jordemoderstuderende og medicinstuderende. Viborg, maj 2016. (Invited speaker).

Haahr T.  
Treatment of bacterial vaginosis in pregnancy in order to reduce the risk of spontaneous preterm delivery – A clinical guideline.  
European Spontaneous Preterm Birth Congress (ESPBC) 2016. Gøteborg, Sverige, maj 2016. (Poster).

Haahr T.  
Treatment of bacterial vaginosis in pregnancy in order to reduce the risk of spontaneous preterm delivery – A clinical guideline.  
Forskningsdag. Hospitalsenhed Midt, april 2016. (Oral præsentation).

Haahr T.  
Young clinical investigators initiative.  
European Spontaneous Preterm Birth Congress  
(ESPBC) 2016. Göteborg, Sverige, maj 2016.  
(Oral presentation).

Humaidan P.  
Are AMH level and AFC useful predictors of  
outcomes in poor ovarian responders? A post  
hoc analysis of the ESPART randomized  
controlled trial.  
ESHRE 2016. Helsinki, Finland, juli 2016.  
(Abstract).

Humaidan P.  
Basic endocrinology and folliculogenesis.  
Center Consultancy Guangdong No.2 People's  
Hospital. Guangzhou, Kina, september 2016.  
(Invited speaker).

Humaidan P.  
Basic endocrinology and folliculogenesis.  
HEAT High profile experts in ART. Beijing, Kina,  
september 2016. (Invited speaker).

Humaidan P.  
Basic endocrinology and folliculogenesis.  
HOPE. Shanghai, Kina, maj 2016. (Invited  
speaker).

Humaidan P.  
Clinical observation program, Skive, sponsored  
by MSD. Skive, juni 2016. (Arrangør).

Humaidan P.  
Clinical strategies to reduce time to pregnancy  
and live birth.  
Time To Live Birth Meeting. Rom, Italien,  
december 2016. (invited speaker).

Humaidan P.  
COS strategies to increase oocyte number and  
quality.  
First World Conference on LH in ART – Asia  
pacific. Bangkok, Thailand, november 2016.  
(Invited speaker).

Humaidan P.  
Diagnosis and treatment of predicted normal,  
low, and poor responders.  
IVF meeting, MSD. København, april 2016.  
(Invited speaker).

Humaidan P.  
Folliculogenesis in 2016.  
IMPART. Dubai, Forenede Arabiske Emirater,  
maj 2016. (Invited speaker).

Humaidan P.  
From POR to low prognosis concept: A new  
stratification by POSEIDON Working group.  
First World Conference on LH in ART – Asia  
pacific. Bangkok, Thailand, November 2016.  
(Invited speaker).

Humaidan P. GnRH trigger State of the ART.  
Citic Xiangya Hospital Exchange Meeting.  
Changsa, Kina, december 2016 (Invited  
speaker).

Humaidan P.  
GnRHa trigger – State of the ART.  
Scientific Cooperation in Reproductive Medicine  
Research III. Warszawa, Polen, juni 2016.  
(Invited speaker).

Humaidan P.  
GnRHa trigger State of the ART.  
Dutch Annual IVF Specialist Meeting.  
Amsterdam, Holland, oktober 2016. (Invited  
speaker).

Humaidan P.  
GnRHa trigger: where are we now with this  
novel approach?  
HOPE. Shanghai, Kina, maj 2016. (Invited  
speaker).

Humaidan P.  
HCG versus GnRH agonist trigger – A continuous  
debate.  
IMPART. Dubai, Forenede Arabiske Emirater,  
maj 2016. (Invited speaker).

Humaidan P.  
ICOS – Poor responder.  
Excellence in ART: Clinical and laboratory  
perspectives. Cappadocia, Tyrkiet, april 2016.  
(Invited speaker).

Humaidan P.  
Impact of polymorphisms of gonadotropins and  
their receptors on controlled ovarian stimulation:  
a prospective observational study.  
ESHRE 2016. Helsinki, Finland, juli 2016.  
(Poster).

Humaidan P.  
The impact of total follicle-stimulating hormone  
(FSH) dose on outcomes in ESHRE Bologna poor  
ovarian responders. A post-hoc analysis of the  
ESPART randomized controlled trial.  
ESHRE 2016. Helsinki, Finland, juli 2016.  
(Abstract).

Humaidan P.  
Individualization in ART-iCOS (LH supplementation rationale, subgroups).  
HEAT High profile Experts in ART. Beijing, Kina, september 2016. (Invited speaker).

Humaidan P.  
The luteal phase in the natural versus the stimulated cycle.  
Center Consultancy Guangdong No.2 People's Hospital. Guangzhou, Kina, september 2016. (Invited speaker).

Humaidan P.  
The luteal phase of the natural versus the stimulated cycle.  
HEAT High profile Experts in ART. Wuhan, Kina, september 2016. (Invited speaker).

Humaidan P.  
The luteal phases of the spontaneous and stimulated cycles.  
IMPART. Dubai, Forenede Arabiske Emirater, maj 2016. (Invited speaker).

Humaidan P.  
Management of altered endometrial receptivity after COS.  
New perspectives in time to pregnancy. Rom, Italien, april 2016. (Invited speaker).

Humaidan P.  
Matching patient and protocol in low prognosis - is it possible?  
Center Consultancy Guangdong No.2 People's Hospital. Guangzhou, Kina, september 2016. (Invited speaker).

Humaidan P.  
Matching patient and protocol in low prognosis - is it possible?  
HEAT High profile Experts in ART. Beijing, Kina, september 2016. (Invited speaker).

Humaidan P.  
Matching patient and protocol in low prognosis - is it possible?  
HEAT High profile Experts in ART. Wuhan, Kina, september 2016. (Invited speaker).

Humaidan P.  
Matching patient and protocols in low prognosis - is it possible?  
Educational Breakfast Meeting for Australian IVF specialists (ESHRE 2016). Helsinki, Finland, juli 2016. (Invited speaker).

Humaidan P.  
Matching patient and protocols in low prognosis - is it possible?  
Educational Evening Meeting for Iraqi IVF specialists (ESHRE 2016). Helsinki, Finland, juli 2016. (Invited speaker).

Humaidan P.  
Matching patient and protocols in low prognosis - is it possible?  
First world conference on LH in ART. Napoli, Italien, maj 2016. (Invited speaker).

Humaidan P.  
Molecular and physiological differences between LH and hCG.  
Scientific Cooperation in Reproductive Medicine Research III. Warszawa, Polen, juni 2016. (Invited speaker).

Humaidan P.  
Novel treatments to trigger final oocyte maturation.  
Excellence in ART: Clinical and laboratory perspectives. Cappadocia, Tyrkiet, april 2016. (Invited speaker).

Humaidan P.  
Oocyte number and progesterone levels in IVF - do they matter.  
HEAT High profile Experts in ART. Beijing, Kina, september 2016. (Invited speaker).

Humaidan P.  
Optimal usage of the GnRH antagonist protocol.  
Citic Xiangya Hospital Exchange Meeting. Changsa, Kina, december 2016. (Invited speaker).

Humaidan P.  
Optimal usage of the GnRH antagonist protocol.  
Chengde University Hospital. Chengde, Kina, maj 2016. (Invited speaker).

Humaidan P.  
Ovarian stimulation in ART: Science, clinical evidence, and patients' preference. København, oktober 2016. (Arrangør).

Humaidan P.  
Personalized luteal phase support - the future in ART?  
First World Conference on LH in ART - Asia Pacific. Bangkok, Thailand, november 2016. (Invited speaker).

Humaidan P.  
Poseidon Stratification – moving from POR to low prognosis.  
Citic Xiangya Hospital Exchange Meeting.  
Changsa, Kina, december 2016. (Invited speaker).

Humaidan P.  
Poseidon Stratification and Delphi Consensus – reducing time to pregnancy.  
Merck Conference. Frankfurt, Tyskland, november 2016. (Invited speaker).

Humaidan P.  
Reducing Time to Birth through Precision, Prediction, and Personalized Medicine.  
ESHRE 2016. Helsinki, Finland, juli 2016. (Chairman).

Humaidan P.  
Results of the ESPART randomized controlled trial investigating recombinant luteinizing hormone supplementation for controlled ovarian stimulation in poor ovarian responders aligned with the Bologna criteria.  
ESHRE 2016. Helsinki, Finland, juli 2016. (Abstract).

Humaidan P.  
R-LH versus HMG differentiation – molecular, functional and clinical.  
First world conference on LH in ART. Napoli, Italien, maj 2016. (Invited speaker).

Humaidan P.  
Should intrauterine insemination be performed before or after ovulation? A retrospective analysis of 6701 cycles.  
ESHRE 2016. Helsinki, Finland, juli 2016. (Poster).

Humaidan P.  
The birth weight of term singletons after frozen-thawed embryo transfer (FET) treatments is higher using hormonal substitution than natural cycle.  
ESHRE 2016. Helsinki, Finland, juli 2016. (Poster).

Humaidan P.  
The stratification of patients of advanced age and iCOS.  
Third Party Meeting by Wuhan Union Hospital IVF Center. Wuhan, Kina, september 2016. (Invited speaker).

Humaidan P.  
Tiltrædelsesforelæsning, professor Nikos Polyzos. Skive, 21. januar 2016. (Arrangør).

Humaidan P.  
What is the optimal luteal phase support after FET?  
The next ice age is coming. Aarhus, november 2016. (Invited speaker).

Humaidan P.  
What is the optimal luteal phase support after FET?  
The next ice age is coming. København, oktober 2016. (Invited speaker).

Povlsen BB.  
The Scandinavian IVF-lab.  
Clinical observation program, Skive, sponsored by MSD. Skive, juni 2016. (Invited speaker).

## **Undervisning**

Alsbjerg B. Klinisk lektor, Aarhus Universitet.

Haahr T. Klinisk assistent, AUH.

Humaidan P. Professor, AUH.

## **Udvalgsarbejde og anden virksomhed**

Bettina B. Povlsen

- Medlem af Nordic IVF-Laboratory Society (NILS).

Birgit Alsbjerg.

- Guideline udarbejdelse. Dansk Fertilitets-selskab.

Thor Haahr

- Guideline udarbejdelse (vaginal seeding). Dansk Selskab for Gynækologi og Obstetrik.
- Vejleder for kandidat- og bachelorprojekt, Aarhus Universitet.

## **Videnskabelig bedømmelse**

Birgit Alsbjerg

- Reviewer for European Journal of Obstetrics & Gynecology and Reproductive Biology og Reproductive Biomedicine Online.

Helle Elbæk

- Reviewer for Ugeskrift for Læger.

Peter Humaidan

- Reviewer for Acta Obstetrica et Gynecologica Scandinavica, Archives of Gynecology and Obstetrics, Asian Journal of Andrology, Fertility and Sterility, Gynecological Endocrinology, Human Reproduction, Obstetrics and Gynecology, Reproductive Biology and Endocrinology, Reproductive Biomedicine Online og Womens Health.

### **Priser, legater og fondsdonationer**

Løbende forskningskonto.

Ferring, 160.000 kr. (Lønmidler + kursustilskud).

Løbende forskningskonto, study nurse.

Cook Medical, unrestricted research grant, 120.000 kr.

Merck Group, 150.000 kr.

Thor Haahr

Det vaginale mikrobiomstudie.

Clinical trial agreement med Osel inc. ®, 1.200.000 kr.

Fonden af 1870, 10.000 kr.

Fuldt ph.d.-stipendiat, Aarhus Universitet. (ph.d. løn).