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CONFERENZA STAMPA DI PRESENTAZIONE DEL CONVEGNO SULLE CELLULE STAMINALI ADULTE ORGANIZZATO DAL DIPARTIMENTO "SCIENZA E FEDE" DEL PONTIFICO CONSIGLIO DELLA CULTURA

- INTERVENTO DEL REV.DO TOMASZ TRAFNY
- INTERVENTO DELLA DOTT.SSA ROBIN L. SMITH

Alle ore 11.30 di questa mattina, nell'*Aula Giovanni Paolo II* della Sala Stampa della Santa Sede, ha luogo la conferenza stampa di presentazione del Convegno Internazionale *Cellule staminali adulte: la scienza e il futuro dell'uomo e della cultura*, organizzato dal Dipartimento "Scienza e Fede" del Pontificio Consiglio della Cultura (Vaticano - Aula Nuova del Sinodo, 9-11 novembre 2011).

Intervengono alla Conferenza Stampa: l'Em.mo Card. Gianfranco Ravasi, Presidente del Pontificio Consiglio della Cultura; il Rev. do Tomasz Trafny, Direttore del Dipartimento "Scienza e Fede" del Pontificio Consiglio della Cultura; la Dott.ssa Robin L. Smith, Chairman and CEO, NeoStem Inc. (USA).

Pubblichiamo di seguito gli interventi del Rev.do Tomasz Trafny e della Dott.ssa Robin L. Smith:

- INTERVENTO DEL REV.DO TOMASZ TRAFNY Testo in lingua italiana Testo in lingua inglese

Testo in lingua italiana

Sicuramente molti si pongono tre domande: perché il Pontificio Consiglio della Cultura è coinvolto nell'iniziativa riguardante la ricerca sulle cellule staminali adulte; perché ci sia una collaborazione con un'azienda biofarmaceutica *NeoStem* e quali sono i progetti legati a questa collaborazione.

La risposta alla prima domanda va ricercata nella missione del nostro dicastero, chiamato a dialogare con tutte le espressioni della cultura contemporanea, fortemente impregnata e plasmata dalla scienza. È risaputo che già da diverso tempo, il Pontificio Consiglio della Cultura si è impegnato nel promuovere un serio dialogo tra le scienze naturali e umane, specialmente la filosofia e la teologia, come p.es. Progetto STOQ. La scelta di indagare sulla ricerca riguardante le cellule staminali adulte è, quindi, una naturale conseguenza di un percorso intrapreso alcuni anni fa.

L'interesse, però, che abbiamo in questa particolare indagine è piuttosto circoscritto. Esso si prefigge di esplorare l'impatto culturale delle ricerche sulle cellule staminali adulte e della medicina rigenerativa a medio e lungo termine. Tutto ciò ha la sua origine in una duplice convinzione. La prima riguarda il semplice fatto che, secondo le previsioni, nei prossimi decenni, la medicina rigenerativa giocherà un importante ruolo non solo nell'affrontare il problema delle malattie degenerative, ma anche nel pensare alla stessa scienza medica, alle sue potenzialità e, ciò che è particolarmente interessante per noi, alla percezione dell'essere umano nel vasto contesto culturale soggetto ai forti cambiamenti. La seconda è stata idealmente espressa da Edmund D. Pellegrino, medico e filosofo della medicina, il quale vede la medicina come la più umanistica tra le scienze naturali e la più scientifica tra le scienze umane<sup>1</sup>. Abbiamo, quindi, un ambito di inevitabile incontro con una scienza particolare che influirà sul futuro della cultura. Da un lato, tra tutte le scienze, la medicina è la più vicina all'uomo (in effetti, "incontriamo" il medico ancora prima di nascere, per non menzionare quante volte le nostre strade si incrociano nel corso della vita). Dall'altro lato, la medicina odierna interagisce con tutte le dimensioni della cultura: sociale, legislativa, filosofico-teologica o economica (pensiamo alla maggiore longevità che ci pone importanti questioni di assistenza, pensionabilità e altre). Si tratta di una scienza munita di moltissimi sofisticati strumenti tecnologici che pone tante domande esistenziali che necessitano una maggiore riflessione e comprensione.

La risposta alla questione della nostra collaborazione con la *NeoStem* va ricercata in due orizzonti. Il primo riguarda la condivisione della stessa sensibilità verso i valori etici che vedono al suo centro la tutela della vita umana in ogni stadio del suo sviluppo. Il secondo riguarda l'interesse a indagare sull'impatto culturale che possono avere le scoperte scientifiche derivanti dalla ricerca sulle cellule staminali adulte e le loro applicazioni nel campo della medicina rigenerativa. Oggi non è affatto scontato che un'azienda biofarmaceutica abbia una forte sensibilità verso la tutela della vita nella sua totalità, avendo allo stesso tempo un interesse di indagine culturale. Per questo motivo abbiamo pensato di formalizzare una collaborazione e da più di un anno che stiamo tracciando possibili percorsi di sviluppo. Ovviamente la nostra collaborazione è aperta ad altre istituzioni, che condividano gli stessi valori.

Un primo momento significativo di questa collaborazione sarà la Conferenza Internazionale, sul tema *Cellule staminali adulte: la scienza e il futuro dell'uomo e della cultura*, la quale vede la collaborazione e il sostegno di altri due dicasteri della Santa Sede, il Pontificio Consiglio per gli Operatori Sanitari (per la Pastorale della Salute) e la Pontificia Accademia per la Vita. Ai Presidenti di questi due dicasteri S.E.R. Mons. Zimowski, S.E.R. Mons. Carrasco de Paula, e ai loro rappresentanti Monsignor Musivi Mupendawatu e Suaudeau, va la nostra gratitudine per la loro disponibilità, entusiasmo e competenza con cui hanno voluto sostenere questa iniziativa.

La conferenza stessa avrà un carattere divulgativo di alto profilo. Questo vuol dire che la indirizziamo a coloro che non hanno una vera e propria preparazione scientifica riguardante le scienze della vita o medicina. Vorremo presentare ai partecipanti lo Stato dell'arte della ricerca sulle cellule staminali adulte, le applicazioni cliniche che in alcuni casi già portano notevoli benefici ai pazienti, nonché illustrare e discutere alcuni problemi e sfide che nascono nell'ampio orizzonte di interazioni tra la ricerca scientifica e cultura, e che potranno avere un significativo impatto sul futuro dell'uomo. Per questo motivo indirizziamo il nostro invito di partecipare a questa conferenza soprattutto ai vescovi, agli ambasciatori accreditati presso la Santa Sede, ma anche ai ministri della

salute dei Paesi che vorranno essere partecipi a questa iniziativa, *opinion leaders*, media ecc. Speriamo, inoltre, che saranno presenti alcuni dei nostri sostenitori che condividono la stessa sensibilità verso la realtà dei valori etici e il desiderio di promuovere il dialogo tra scienza e religione.

Infine, per ciò che riguarda i possibili progetti, vorremo aiutare gli studenti delle Università Pontificie e istituzioni educative cattoliche a indagare sui temi legati al rapporto tra le scienze naturali e umane in un possibile quadro della ricerca interdisciplinare. Desideriamo anche poter raggiungere un ampio pubblico, specialmente i fedeli e i loro pastori e operatori pastorali a vari livelli che, talvolta si trovano in difficoltà a capire alcuni complessi problemi posti sia dalla scienza, sia dalla filosofia e teologia e che necessitano un'esposizione chiara e comprensibile per coloro che non hanno la preparazione scientifica, ma che desiderano avere non solo una corretta informazione su questi temi, ma anche la disponibilità dei possibili percorsi formativi come *e-learning* o brevi corsi da offrire in disposizione ai centri pastorali diocesani.

Vorrei concludere con una citazione della famosa lettera del Papa Giovanni Paolo II, indirizzata a Padre George Coyne. In essa il Santo Padre scrisse:

*Col crescere del dialogo e della ricerca comune, ci sarà un progresso verso la mutua comprensione e una graduale scoperta di interessi comuni che forniranno le basi per ulteriori ricerche e discussioni. Sta al futuro stabilire in quale forma questo avverrà. Ciò che è importante, (...), è che il dialogo deve continuare e progredire in profondità e in ampiezza. In questo processo dobbiamo superare ogni tendenza regressiva che porti verso forme di riduzionismo unilaterale, di paura e di autoisolamento. Ciò che è assolutamente importante è che ciascuna disciplina continui ad arricchire, nutrire e provocare l'altra ad essere più pienamente ciò che deve essere e a contribuire alla nostra visione di ciò che siamo e di dove stiamo andando.*

Noi crediamo in questa tipologia di dialogo e siamo aperti a esplorare i possibili percorsi di collaborazione con varie istituzioni, singoli scienziati e filantropi che vogliono contribuire all'avvicinamento reciproco tra scienza e religione, per una cultura del futuro impostata sui valori alti.

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1 Cfr. *Humanism and the Physician*, University of Tennessee Press, Knoxville 1979, 117-129.[00953-01.01] [Testo originale: Italiano] **Testo in lingua inglese** Some of you would probably ask: 1) why the Pontifical Council for Culture is involved in an initiative on adult stem cells research; 2) why, then, there is a collaboration with the bio-pharmaceutical company *NeoStem* and 3) which are the projects linked to this collaboration. The answer to the first question has to be found in the mission of our dicastery, that has been called to open a dialogue with all the expressions of modern and contemporary culture, so strongly pervaded and moulded by science. As known, the Pontifical Council for Culture has been engaged for long time in the promotion of a sound dialogue between natural sciences and humanities, above all between philosophy and theology, as demonstrated by the STOQ Project. The choice for such investigation is, therefore, the natural consequence of a route we entered on some years ago. However, the interest we have in this particular investigation is quiet circumscribing: it aims to explore the cultural impact of research on adult stem cells and of regenerative medicine in the long and medium terms. All this, has its roots in a two-fold belief: the first one concerns the fact that, according to the expectations, in the next decades, regenerative medicine will play an important role not only in facing the problem of degenerative disease, but also in thinking to medical science, to its potential and, what is more interesting for us, to the way human being is considered and perceived in such a wide cultural context, continuously subject to strong changes. The second one was theorized by Edmund D. Pellegrino, physician and philosopher of medicine, who considered medicine as the most scientific of the humanities and the most humane of sciences<sup>1</sup>. For this reason, we share a field of dialogue with this specific science that will influence the future of culture. But, if on one hand, , medicine is of all sciences the nearest to human beings ( we indeed meet the doctor before being delivered, not to mention how many times we need to go to the doctor in our life), on the other, modern medicine interact with all the other cultural contexts: social, legislative, philosophical and theological, or economical ones (suffice it to think about the greater longevity that pose ourselves important questions concerning care, pensions and others). We are talking of a science having several and best available technology instruments and that questions ourselves with existential insights, requiring a deeper reflection and understanding. The unique collaboration with *NeoStem* must focus on two considerations. The first one relies on the fact that we share the same sensitivity towards those ethical values that are centred on the protection of human life at all stages of its

existence. The second, concerns interest of investigation on cultural consequences that scientific discoveries in the field of adult stem cells research and their application in regenerative medicine will cause. Today, it is not in any way obvious that a pharmaceutical company would have a strong sensitivity towards the protection of human life in its whole, having at the same time an interest towards cultural investigation. For this reason, we have thought to formalize a collaboration and we have been working since more that one year in order to define potential paths of development. It is clear that our collaboration is open to other institutions sharing the same values. The first significant step of this collaboration will be the International Conference on *Adult Stem Cells: Science and the future of man and culture*, which sees the collaboration and support of two other departments of the Holy See, the Pontifical Council for Health Care (for the Pastoral care of Health) and the Pontifical Academy for life. To the Presidents of these two dicasteries His Excellency Most Rev. Bishop Zimowski, His Excellency Most Rev. Archbishop Carrasco de Paula, and their representatives Monsignors Musivi Mpendawatu and Suaudeau we express our gratitude for their willingness, enthusiasm and competence with which they wanted to support this initiative. The conference itself will have a popular but high profile character. This means that it will be addressed to those who do not have a real scientific background on life sciences or medicine. We would like to introduce participants to the state of the art on adult stem cells research, its clinical applications and, in some cases, clinical applications that have already brought considerable benefits to patients and explain and discuss some problems and challenges arising in the wide consideration of interactions between scientific research and culture, and that can have a significant impact human beings' future. For this reason, we especially invite bishops and ambassadors accredited to the Holy See to participate in this conference, but also the health ministers of the countries that would like to participate in this initiative, opinion leaders, media, etc... We also hope that some of our supporters who share the same sensitivity towards ethical values and a desire to promote dialogue between science and faith will be present. Finally, with regards to the future possible projects, we want to help students of the Pontifical Universities and the Pontifical Catholic Educational Institutes to investigate the issues linked to the relationships between natural sciences and humanities, in a possible framework for interdisciplinary research. We also wish to reach a wide audience, especially the faithful and their pastors, but also pastoral workers at various levels, who sometimes find difficult to understand some complex problems posed both by science, and by philosophy and theology, and which need a clear and understandable explication, also for those who do not have the appropriate scientific background, but who wish to have not only a right information on these issues, but also the possibility for attending *e-learning* courses or short courses to be offered in the diocesan pastoral center. I would like to conclude with a quote from the famous letter that Pope John Paul II addressed to Father Gorge Coyne, where he underlined the importance of the dialogue between science and faith, and between the several fields of knowledge. *As dialogue and common searching continue, there will be grow towards mutual understanding and a gradual uncovering of common concerns which will provide the basis for further research and discussion. Exactly what form that will take must be left to the future. What is important, (...) is that the dialogue should continue and grow in depth and scope. In the process we must overcome every regressive tendency to a unilateral reductionism, to fear, and to self-imposed isolation. What is critically important is that each discipline should continue to enrich, nourish and challenge the other to be more fully what it can be and to contribute to our vision of who we are and who we are becoming.* We do believe in a dialogue carried on in this way, and we are open to all the possible paths of collaboration with several institutions, single researchers and philanthropists who want to share these initiatives, that we hope would have a global impact for the promotion of a culture of future, centred on deep values.

\_\_\_\_\_1 Cfr. *Humanism and the Physician*, University of Tennessee Press, Knoxville 1979, 117-129.[00593-02.01] [Original text: English]● **INTERVENTO DELLA DOTT.SSA ROBIN L. SMITH** Thank you Father Lombardi. I would like to begin by expressing my deepest appreciation to Cardinal Ravasi for his tremendous support and outstanding leadership. On behalf of NeoStem, our shareholders and the Stem for Life Foundation, I am honored to be here today. I would like to take a few minutes to share my vision as the CEO of NeoStem. We are a public company pioneering new medical research with adult stem cells. This research has the potential to alleviate human suffering by unlocking the healing power of the human body. Most importantly, we are able to do all this without destroying another human life. As a trained physician, I've always been motivated to help people and assist in the healing process. Although technology is advancing rapidly, we continue to struggle with the suffering caused by diseases such as; diabetes, multiple sclerosis, coronary artery disease and chronic limb ischemia. However, thanks to some amazing technological advances, we are learning that part of the solution to these diseases and many others, may already be present in our bodies. Each human being has his or her own cellular fingerprint. Each one of us has cells with regenerative powers. These are our Stem Cells. We believe Adult Stem Cells will be the answer to so many debilitating problems impacting people of all ages, all over the world, in all walks of life. At Neostem and the Stem for Life Foundation our goal is to advance medicine by funding and investing in cell based research that can bring cures to all corners of the

globe. But we are not alone. Just ask those who have suffered from disease and been restored to good health. 74-year-old Bernie van Zyl walked into my office. He had a heart attack and was actually clinically dead for a short time. A team of excellent doctors resuscitated Bernie but left him with a failing heart. He was on oxygen 22 hours a day and became another number on a long heart transplant list. In 2005 after failing to find a heart donor, Bernie participated in a clinical trial to repair his heart using his own adult stem cells. Not only did he make a complete recovery, but he also felt years younger. He used this newfound energy to write a book and left a legacy of education about adult stem cell therapy. But as we all know, chronic illness does not just affect the elderly. It can affect people of all ages. A college freshman named Bethany Pappalardo suffered from multiple sclerosis. She never knew when an attack would strike. She woke up one morning to go to class and felt numbness in her legs. By the end of that day she was numb from the neck down. Multiple sclerosis threatened to take away her youth and her chance at a normal life. One year ago she had a stem cell transplant. Since then her MS attacks have stopped and she is living and functioning normally in every way. Adult stem cells returned the youth that MS threatened to take away. These miracles come without the ethical dilemmas posed by the use of embryonic stem cells. No embryos are destroyed to collect adult stem cells. In other words, we do not have to destroy human life to improve and extend human life for those who are struggling with debilitating diseases. We believe that human life is unique and needs to be protected at every stage of its existence. Adult Stem Cell research allows us to advance scientific knowledge while protecting this ethical position. Many companies are searching for the right type of cell to be used for each clinical indication. At NeoStem we have licensed the worldwide rights to a unique type of cell that exists in our bodies. These cells are called very small embryonic-like stem cells (or VSELs). These unique cells are very small and have many of the beneficial characteristics of an embryonic stem cell but without the moral and ethical obstacles because these cells are taken from adults, not embryos or fetuses. According to scientific literature, these VSEL's appear to have the ability to signal the body to heal damaged tissue, to grow blood vessels and to differentiate into cells of different organs without teratoma or cancer formation. As a matter of fact, these cells are circulating in each one of us right now. While the research is still in its early phases of development, the promise of this research is transformational. As we age, stem cells decline, but recent research shows that it is possible to isolate these special cell types from a patient's body and then deliver them precisely where they are needed. While there are many cell types, NeoStem is extremely excited about our worldwide license for VSEL's. And we are encouraged to see other scientists, physicians and companies around the globe focusing on finding cures using adult stem cells. NeoStem has both cutting edge science and a business model focused on advancing adult stem cell therapies. But we want to do more. We want to better understand the cultural impact of our work and help people around the globe learn more about what it will take to move this field forward. This is why the Pontifical Council for Culture has chosen NeoStem as a partner. At NeoStem, we are living proof that faith and science can be good partners. Today we are making history. I am here with you today because of an historic collaboration between the Vatican and NeoStem. This collaboration is already underway and we are actively preparing for an upcoming event at the Vatican, this November to further these efforts. While our joint effort is new, the connection between science and spirituality goes back farther than many people realize. Throughout human history, men of great intellect have also been men of great faith. There is Gregor Johan Mendel, an Augustinian priest who is considered the father of modern genetics and a 13th century bishop and physician better known as Pope John XXI, also to be called the ophthalmologist Pope, who is credited with writing a widely-used medical textbook. I believe science must not be viewed in a vacuum and without considering ethical issues and cultural impacts. Together they can enrich our knowledge and create a tremendous positive impact on humanity. I would like to quote a very well known Jewish physicist and Nobel Prize Winner, Richard Feynman. Feynman was critical of religion, yet he was convinced that, quote; "no discussion can be made, of the meaning of life, without coming to the great source of systems of morality and descriptions of meaning, which is in the field of religion." Our partnership with the Vatican is focused on four things: 1) to advance science 2) to eliminate human suffering 3) to educate today's society as well as future generations and 4) to encourage collaboration in the furtherance of these goals. I am proud of the state of the art research we are doing at NeoStem and want to offer hope to the thousands of people who are currently suffering from debilitating diseases. I am excited about our work with the Pontifical Council for Culture and other Vatican offices. The long existence of the Catholic Church gives it the wisdom to understand, evaluate and embrace new medical advancements surrounding the healing process. We feel that our collaboration can be summarized by the last four letters of our company's name - "Stem""Science, Theology Education and Medicine." It is an honor to be here today to recognize the collaboration of reason and faith, of theology and intellect, and to recognize the privilege of using our God given talents and energies for a joint purpose. We look forward to working together with Cardinal Ravasi, his collaborator Father Trafny, and other Church leaders to demonstrate that a historical religious institution and a cutting-edge technology company can work together not only to bring benefits to those who suffer, but also to explore the deep cultural impact it could have for the future. Thank

