

CURRICULUM VITAE ET STUDIORUM

ALBERTO AREZZO

Profile

General Surgeon and Digestive Endoscopists for operative procedures, mainly dedicated to clinical activity, with an academic role and deeply involved in several research projects sponsored by the European Commission and private companies.

1. PERSONAL DATA:

Arezzo, Alberto

male, born 09.08.1968 in Genova, Italian,

Professional address: Department of Surgical Sciences, University of Torino, corso A.M.Dogliotti 14, 10126 Torino, Italy, tel +39 011 6336641, alberto.arezzo@unito.it

Written and spoken languages: English, German, French, Italian

2. PRESENT POSITION:

Associate Professor of Surgery at the Unit of General Surgery I, Department of Surgical Sciences, University of Torino since 2014.

He dedicates 20% of his working time to teaching, 20% to research, 55% to clinical work, and 5% to administration.

3. DIPLOMAS:

1986-1992: School of Medicine (6 years), University of Genova, Italy.

19.10.1992, Bachelor of science Degree in Medicine and Surgery, University of Genova, Italy, 110/110 magna cum laude, discussing the Thesis "Near Total Thyroidectomy for Graves' Disease".

1992-1997: School of General Surgery (5 years), University of Genova. Italy and University of Tuebingen, Germany.

27.10.1997, Specialist Certification in General Surgery, University of Genova, Italy & University of Tuebingen, Germany, 50/50 magna cum laude, discussing the Thesis "Robotics and positioning systems for laparoscopic solo-surgery", tutor Gerhard Buess.

4. TRAINING AND EDUCATION SINCE SECONDARY SCHOOL DIPLOMA

1981-1986 High School Diploma (Baccalaureate) at Liceo Classico A.D'Oria, Genova, Italy

5. PROFESSIONAL ACTIVITIES (POST-GRADUATE) :

1997-1999: Assistant Professor of Surgery, University of Tuebingen, Germany

Scientist at the Section for Minimally Invasive Surgery at the Eberhart Karls University of Tuebingen, Germany, Dir. Prof. Med. Gerhard Buess, pioneer of endoscopic surgery. There he learned tips and tricks of laparoscopy and was educated to Transanal Endoscopic Microsurgery directly from the inventor as mentor. Tuebingen was also a unique environment to be introduced to an international top level research activity, mainly in the field of development of new technologies.

In order to report results of research activities he learned how to write a scientific paper, producing in few years a consistent number of relevant papers in international journals

1999 - 2004 - Assistant Surgeon, ASL 1 Liguria, Italy

where he consolidated experience in endoscopic surgery with more than a thousand procedures, including emergencies. There he established a new Dept. of Digestive Endoscopy, training colleagues and nurses. At the same time he performed about 5.000 ultra-sound exams.

2004 - 2007 - Assistant Surgeon, Evangelic International Hospital, Genoa, Italy

where he led the Dept. of Endoscopic Surgery with more than a thousand surgical procedures, including emergencies, mainly consisting of digestive surgery (gastrectomy, colectomy, proctectomy). He participated to the activity of the Service of Digestive Endoscopy, mainly performing operative procedures, such as difficult polypectomies, mucosectomies (EMR), endoscopic submucosal dissections (ESD), bleeding control by bipolar coagulation or Ovesco clip application and stenting for unresectable esophageal and colorectal cancers. At the same time he performed about further 5.000 ultra-sound exams.

2007 - 2014 - Assistant Professor of Surgery, University of Turin, Italy

where, at the Dept. of Surgical Sciences, Dir. Prof. Mario Morino, pioneer of endoscopic surgery, he is covering a special role for Endoscopic Surgery. Till now he performed more than five thousand procedures, mainly colorectal surgery, open, laparoscopic and transanal, including emergencies. He is considered an international expert in the field of proctology and Transanal Endoscopic Microsurgery. Other fields of interest and clinical activity are gall bladder and biliary tract, liver, stomach and esophago-gastric junction, spleen, small bowel, adrenal glands. He is participating to the activity of the Service of Digestive Endoscopy, mainly performing operative procedures, such as difficult polypectomies, mucosectomies (EMR), endoscopic submucosal dissections (ESD), bleeding control by band ligation, glue injection, sclerosis agents injection or Ovesco clip application and stenting for unresectable esophageal and colorectal cancers, even when obstructing the bowel. He was regularly on duty as young fellow surgeon first and as senior fellow and main responsible surgeon in the Emergency room and Digestive Endoscopist.

2014 - today - Associate Professor of Surgery, University of Turin, Italy

On October 1st 2014 he became Associate Professor of Surgery, at the same Dept. of Surgical Sciences, Dir. Prof. Mario Morino, covering the same duties, plus regularly on duty as a senior fellow in the Emergency room and Digestive Endoscopist.

6. TEACHING:

1997 - 1999 - Assistant Professor of Surgery, University of Tuebingen, Germany

where he worked as Faculty and Tutor of the courses of Advanced Laparoscopic Surgery and Transanal Endoscopic Microsurgery at the Training Center, Dir. Prof. Med. Gerhard Buess.

2007 - today - Assistant and then Associate Professor of Surgery, University of Turin, Italy

where, at the Dept. of Surgical Sciences, Dir. Prof. Mario Morino, he is Teacher of Emergency Surgery at the VI year of the School of Medicine, since his settlement (2007). Similarly he is teacher and tutor of courses at the School of Surgery, such as Scientific English, Surgical Anatomy and Digestive Surgery. He is the Vice-Coordinator of the PhD Course in Technology Applied to Surgical Sciences, a 3 years international course training surgeons of different specialties to research activity in novel technology development. He is member of the PhD Course in Biotechnology and Surgical Sciences, a 3 years international course training surgeons of different specialties to research activity in novel technology development, in conjunction with the Politecnico di Torino, the local University School of Engineering. He is Faculty and Tutor of the II Level University Master course in Advanced Laparoscopy for MDs. He is Director, Faculty and Tutor of the II Level University Master course in Operative Digestive Endoscopy for MDs. He is Coordinator, Faculty and Tutor of the I Level University Master course in Digestive Endoscopy for nurses. His total amount of teaching hours counts 350 hours per year since 2007. For each of the courses he is preparing the teaching material personally in form of slides and of an unedited textbook, both updated year after year. He is currently developing the e-learning platform for the University of Torino, School of Medicine.

Since 1.11.07 he was qualified as Assistant Professor of Surgery.

Since 1.11.08 he was qualified as Aggregate Professor of Surgery.

Since 1.10.14 he was qualified as Associate Professor of Surgery.

7. RESEARCH:

- in 1997 discussed a thesis on robotics and positioning systems for endoscopic surgery at the University of Tuebingen, at the end of a technology development of several prototypes in partnership with the Karlsruhe Nuclear Research Center (Germany) named ARTEMIS (7 DoF robot manipulator), FIPS (4 DoF remote controlled optic positioning system) and TISKA (4 DoF passive retractor positioning system) later acquired by Karl Storz Endoskope (Tuttlingen) for further development and marketing
- since 1997 partner of several different projects in the field of flexible endoscopy with Boston Scientific, Microvasive Endoscopy (Boston, MA, USA) on endoluminal GERD treatment, colonic large polyps resection, endoluminal clips and stapling
- 1997-1999 main investigator of a research project on robotics in endoscopic surgery with Karl Storz Endoskope GmbH (Tuttlingen, Germany)
- 1997-1999 coordinator of a Research Project on Gastro Esophageal Reflux with Willy Ruesch GmbH (Kernen, Germany)
- since 1999 coordinator of a Research Project on robotics in endoscopic surgery with the National Forschung Zentrum Karlsruhe and Innomedic company (Germany)
- since 2003 partner of OVESCO GmbH, (Tuebingen, Germany) for the 2test and clinical employment of a new large nitinol clip for flexible endoscopy.
- from 1.12.01 to 30.11.03 partner of an international consortium for a Research Project named **CLEANTEST** on Cleaning, sterilization and design of instruments for endoscopic surgery sponsored by the European Community within the V TMR (FP5).
- since 1.3.2002 Consultant for Boston Scientific Microvasive Endoscopy (Boston, MA, USA)
- since 1.9.2003 Consultant for Ethicon Endosurgery (Johnson & Johnson Medical) Italy
- 2003 - 2005 Consultant for Bbraun Aesculap (Tuttlingen, Germany) for the development and clinical trial of ENDOFREEZE (4 DoF passive retractor positioning system)
- since 1.5.2005 Consultant for Johnson & Johnson Medical Europe, Inscope Division
- since 1.09.06 partner of an international consortium for a Research Project named **VECTOR** on development of a robotic capsule for GI endoscopy sponsored by the European Community, sponsored by the European Community within the VI TMR (FP6) for a total of 9.000.000 euros of contribution.
- since 2006 partner of several different projects in the field of flexible endoscopy with NOVINEON GmbH (Tuebingen, Germany) with special regards to Endoluminal Flexible Surgery and NOTES.
- since 1.3.09 Coordinator of the ESCO-study (Endoscopic Stenting for Colonic Obstruction), international multicenter randomized controlled trial sponsored by the European Association for Endoscopic Surgery (www.escostudy.zapto.org)
- since 1.09.2009 Consultant for Johnson & Johnson Medical Europe, Titan project
- since 1.4.2010 Consultant for Bbraun Aesculap, (Tuttlingen, Germany)
- from 1.6.11 to 30.07.16 Coordinator of the MUSIC-study (MULTI-PORT VS. SINGLE-PORT CHOLECYSTECTOMY), international multicenter randomized controlled trial sponsored by the European Association for Endoscopic Surgery with a research grant of 50.000 euros (www.music.world.it)
- since 1.09.2011 Consultant for Johnson & Johnson Medical USA, Gemini project

- since 1.10.2011 Coordinator of the *Polymeric films and magnetic forces for gallbladder retraction during a fully transluminal cholecystectomy* sponsored by the EURONOTES FOUNDATION with a research grant of 20.000 euros
- from 1.1.12 to 31.12.15 partner of an international consortium for a Research Project named **STIFF-FLOP** on STIFFness controllable Flexible and Learnable Manipulator for surgical OPERations sponsored by the European Community within the VII TMR (FP7), as scientific responsible both for the University of Turin and the European Association for Endoscopic Surgery, for a total of 7.350.000 euros of contribution.
- since 1.3.2012 Coordinator of the TEMENDO-study (Transanal Endoscopic Microsurgery vs. ENDoscopic Submucosal Dissection for large rectal adenomas), international multicentre randomized controlled trial sponsored by the European Association for Endoscopic Surgery (www.temendo.zapto.org)
- since 1.11.2014 Consultant for Bbraun GmbH, Germany
- since 1.03.2015 Consultant for Teleflex Medical, Morrisville, NC, USA
- from 1.12.2015 to 31.5.19 partner of an international consortium for a Research Project named **EndoVESPA** (Endoscopic Versatile robotic guidance, diagnosis and therapy of magnetic-driven soft-tethered endoluminal robots) then renamed **ENDOO**, sponsored by the European Community within the HORIZON 2020 framework, as scientific responsible for the University of Turin, for a total of 4.350.000 euros of contribution.
- from 1.6.19 Coordinator of the COLORAL1-study (Multicenter, Prospective, Randomized, Controlled Trial on preoperative oral antibiotics prophylaxis in colorectal surgery , <https://clinical-trial.zapto.org/coloral/>), international multicenter randomized controlled trial sponsored by the Italian Society for Endoscopic Surgery SICE.

8. CLINICAL :

Since the beginning of his career he dedicated most of its interests to the diagnosis and treatment of the disease of the digestive tract, with particular interest for the lower GI. In Tuebingen he learned tips and tricks of laparoscopy and was educated to Transanal Endoscopic Microsurgery directly from the inventor as mentor. At the same time he began his activity as flexible endoscopist, which he consolidated once back to Italy, at ASL1 Liguria. Moreover he got instructed in the use of ultrasound collecting about 5.000 ultra-sound exams.

Today he is mainly dedicated to minimally invasive therapy of any digestive tract disease. He is considered an international expert in the field of proctology and Transanal Endoscopic Microsurgery having tutored more than 300 participants to the courses on this technique, including mentoring at the operative table. Of course he is an expert in minimally invasive treatment of colorectal cancer, and rectal cancer in particular where he pioneered transanal endoscopic microsurgery under spinal anaesthesia, as well as the first transanal fluorescence guided lymph node sampling, till today being one of the pioneers of the Ta-TME technique which has become today a standard for radical treatment of rectal cancer. He collected an extensive clinical record in visceral surgery, both upper and lower GI. This consist of more than 10.000 surgical procedure, in the last years mostly major surgery procedures, such as colorectal cancers or emergency, either as first surgeon or tutor of residents or masterclass students. Other fields of interest and clinical activity are gall bladder and biliary tract, liver, stomach and esophago-gastric junction, spleen, small bowel, adrenal glands. The Unit he is member of, under the direction of Prof Mario Morino, collected within between 2008 and 2017, since he came to Torino, 5841 surgical procedures for colorectal diseases (hemicolectomies, total colectomies, anterior resections), 1043 surgical procedures for upper GI (esophagectomies, gastrectomies, Heller miotomy, Nissen fundoplication), 438 surgical procedures for liver and pancreas diseases (hepatectomy, metastasectomy, pancreatectomy), 1203 surgical procedures for obesity (gastric bypass, sleeve gastrectomy) and 356 adrenalectomies. To this activity he participated actively gaining skills in laparoscopy and in robotic surgery which is routinely used for digestive disease treatments.

Other field of interest is the activity of the Service of Digestive Endoscopy, where he mainly performs operative procedures, such as difficult polypectomies, mucosectomies (EMR), endoscopic submucosal dissections (ESD), bleeding control by band ligation, glue injection, sclerosis agents injection or Ovesco clip application and stenting for unresectable esophageal and

colorectal cancers, even when obstructing the bowel. He is regularly on duty as senior responsible fellow in the Emergency room and Digestive Endoscopist.

9. ADMINISTRATION:

- till 2014 Vice-Coordinator of the PhD Course in Technology Applied to Surgical Sciences
- till 2020 Vice-Coordinator of the PhD Course in Biotechnology and Medical-Surgical Sciences
- Director of the II Level University Master course in Operative Digestive Endoscopy for MDs.
- Scientific Coordinator of the I Level University Master course in Digestive Endoscopy for nurses.
- Member of the MD/PhD Council for students of the School of Medicine
- Member of the Council of the Department of Surgical Sciences.

10. HONOURS AND AWARDS:

- 1991 & 1992 Fellowship of the Italian Secretariat of Students in Medicine (SISM)
- 1993 Prize "Ettore Ruggeri" of the Italian Society of Surgery (SIC)
- 1996 Fellowship of the Deutscher Akademischer Austausch Dienst (DAAD)
- 1998 Prize of the European Association of Endoscopic Surgery (EAES)
- 1999 Prize City of San Remo, for a Lecture on Coloproctology
- 1999 Research Fellowship of Karl Storz Endoskope, for a study on robotics
- 1999 Prize "Paride Stefanini" of the Italian Society of Endoscopic Surgery (SICE)
- 2010 Research Grant of the European Association of Endoscopic Surgery (EAES)
- 2010 Research Grant of the EURONOTES Foundation
- 2011 Prize of the European Association of Endoscopic Surgery (EAES)
- 2012 Prize of Technology Committee of European Association of Endoscopic Surgery (EAES)
- 2012 Olympus Prize of the European Association of Endoscopic Surgery (EAES)
- 2012 Prize Life Sciences - Italian Venture Capitalist FORUM
- 2013 Prize of the START UP Company Challenge Piedmont, Italy

11. PROFESSIONAL SOCIETIES:

He is currently member of

- UEG, United European Gastroenterology
- EAES, European Association for Endoscopic Surgery
- SMIT, Society for Medical Innovation and Technology
- ESCP, European Society for ColoProctology
- ESGE, European Society for Gastrointestinal Endoscopy
- ASGE, American Society for Gastrointestinal Endoscopy
- ECTA, Eurasian Colorectal Technology Association
- EATS, European Association for Translumenal Surgery
- SICE, Italian Society for Endoscopic Surgery
- SICCR, Italian Society for ColoRectal Surgery
- SIED, Italian Society for Digestive Endoscopy
- SICTECA, Italian Society of Technologic and Computer Assisted Surgery

He was former member of the UEG e-learning Task Force

He was former member of the UEG Future Trends Committee

He was former President (2017-2018) and member of the Board of SMIT, Society for Medical Innovation and Technology

He was former Vice-President of the SICE, Italian Society for Endoscopic Surgery

He was former coordinator of the EURONOTES Clinical Registry (www.euronotes.world.it)

He was former responsible of the ECTA website (www.ectamed.org)

He was former responsible of the SICCR website (www.siccr.org)

He was former responsible of the SIED website (www.sied.it)

He was former responsible of the SICE website (www.siceitalia.com)

He is Chairman of the Technology Committee of the EAES

He is Chairman of the Program Committee of the EAES

He is General Secretariat of the SICE

He is member of the UEG Scientific Committee

12. OFFICIAL POSTS:

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13. TECHNICAL AND SCIENTIFIC ROLES:

He was former Assistant Editor of the Journal Techniques in Coloproctology, Springer Verlag Ed., official journal of ECTA and SICCR, when it obtained the first IF, 1.53 at that time

He was former member of the Editorial Board of Surgical Endoscopy, Springer Verlag Ed., official journal of SAGES & EAES, IF 4.0 at that time

He was former member of the Editorial Board of the UEG Journal, SAGE Ed., official journal of UEG, IF 3.6 at that time

He is currently Editorial of Minimally Invasive Therapy and Allied Technologies (MITAT), Taylor & Francis Ed., official journal of SMIT, IF 1.2

He is currently member of the Editorial Board of the World Journal of Gastrointestinal Surgery

He is reviewer of the Journals:

- Annals of Surgery
- Gastrointestinal Endoscopy
- Endoscopy
- British Journal of Surgery
- Surgical Endoscopy
- Techniques in Coloproctology
- Minimally Invasive Therapy and Allied Technologies (MITAT)
- Colorectal Disease.

14. GRANTS:

- 1996 Grant of the Deutscher Akademischer Austausch Dienst (DAAD) (1.5.96 - 31-10-96)
- 1999 Research Fellowship of Karl Storz Endoskope, for a study on robotics (1.12.98 - 30.11.99) (48.000 DM)
- 2010 Research Grant of the European Association of Endoscopic Surgery (EAES) (1.10.2011 - 30.09.2014) (50.000 EU)
- 2010 Research Grant of the EURONOTES Foundation (1.10.2010 - 30.09.2012) (20.000 EU)
- 2011/12 Research Grant (Ricerca Finalizzata) of the Ministry of Health for the study "GLP-1 agonist treatment vs. endoscopic procedures in obesity management and type II diabetes mellitus: a randomized clinical trial" (1.10.2014 - 30.09.2017) (253.000 EU)
- 2013 Research Grant (Ricerca Finalizzata) of the Ministry of Health for the study "Pre-clinical development and validation of a endoscopic robot with soft thread to replace colonoscopy" (1.12.2016 - 30.11.2019) (274.000 EU)
- from 1.12.01 to 30.11.03 partner of an international consortium for a Research Project named **CLEANTEST** on Cleaning, sterilization and design of instruments for endoscopic surgery sponsored by the European Community within the V TMR (FP5) (365.000 EU)

- from 1.09.06 to 31.08.11 partner of an international consortium for a Research Project named **VECTOR** on development of a robotic capsule for GI endoscopy sponsored by the European Community, sponsored by the European Community within the VI TMR (FP6) for a total of 9.000.000 euros of contribution.
- from 1.1.2012 to 31.12.2015 partner of an international consortium for a Research Project named **STIFF-FLOP** on STIFFness controllable Flexible and Learnable Manipulator for surgical OPerations sponsored by the European Community within the VII TMR (FP7), as scientific responsible both for the University of Turin and the European Association for Endoscopic Surgery, for a total of 7.350.000 euros of contribution.
- from 1.12.2015 to 31.05.2019 partner of an international consortium for a Research Project named **EndoVESPA** (**Endoscopic Versatile robotic guidance, diagnoSis and theraPy** of magnetic-driven soft-tethered endoluminal robots), then renamed **ENDOO**, sponsored by the European Community within the HORIZON 2020 framework, as scientific responsible for the University of Turin, for a total of 4.350.000 euros of contribution.
- he has recently applied for an ERC SYNERGY GRANT 2018 and 2019 as Coordinator, of a the Project Endoluminal Integrated Resection Robot Embedded in the Colon, Proposal Acronym: ENDOLUMINAIRE-C, consortium including as further Co-Principal Investigators Co-Principal Investigators (co-PIs) Prof. Kaspar Althoefer (Centre for Advanced Robotics @ Queen Mary (ARQ), Faculty of Science and Engineering, Queen Mary University of London (QMUL) UK, Prof. Bruno Siciliano, Consorzio di Ricerca C.R.E.A.T.E. (CREATE) IT and Prof. Guang-Zhong Yang, Hamlyn Centre for Robotic Surgery @ Institute of Global Health Innovation (HCRS), Faculty of Engineering Imperial College of London (ICL) UK. He achieved the third level of selection, and was interviewed in Bruxelles. He has recently resubmitted the Proposal for the ERC SYNERGY GRANT 2020 call, and he is awaiting for the review.

15. PATENTS:

- A miniature robotic device applicable to a flexible endoscope for the surgical dissection of gastrointestinal tract surface neoplasms (WO 2014147556 A1)
- A connecting device for creating an anastomosis between a hollow organ and a conduit (WO 2013004263 A1)
- A device for transluminal diversion of bile (WO 2012007044 A1)
- System and method for modifying the location at which biliopancreatic secretions interact with the gastrointestinal tract (WO 2012007050 A1)

16. THESIS DIRECTOR:

He tutored an average of 2 medical students per year for they Bachelor Thesis, as well as an average of 5 students per year of the Master class in Digestive Endoscopy, 1 PhD student per year for the course of Bioengineering and Surgical Sciences.

17. SCIENTIFIC PUBLICATIONS:

He is author of 215 publications on Scopus, (Scopus Author ID: 6701795382), H-index 36, 3851 citations, 10-years Scopus H-index is 29.

ORCID: 0000-0002-2110-4082

He is author of 181 publications on Pubmed.

<https://pubmed-ncbi-nlm-nih-gov.bibliopass.unito.it/?term=arezzo+a&sort=date&size=200>

Torino, April 18th, 2020


Alberto Arezzo