September 2020

Dan G. Ohad

CURRICULUM VITAE

1. Higher Education and Professional Training

1983- 1986:	B.Sc. in Biology (extended studies); The Hebrew University of Jerusalem, Israel.
1983- 1987:	B.A. in Psychology (**with honors**). The Hebrew University of Jerusalem.
1987- 1991:	Doctor of Veterinary Medicine; the Koret School of Veterinary Medicine, the Faculty of Agriculture, the Hebrew University of Jerusalem.
1991:	Licensed to practice veterinary medicine in Israel by The Veterinary and Herd Health Services of The State of Israel (The Ministry of Agriculture and Rural Development); License number: 1078.
1997:	Ph.D. awarded in Applied Cardiac Electrophysiology; Hebrew University of Jerusalem, Israel. Subject of doctoral dissertation: "Endocardial mapping of ventricular tachycardia foci with a percutaneously introduced multielectrode catheter, to facilitate radio-frequency ablation". Mentors: Prof. Micha Eldar, Head of the Neufeld Cardiac Research Institute, the Tel-Aviv University and the Sheba Medical Center, Tel-Hashomer, and Prof. Hylton Bark, the

	Koret School of Veterinary Medicine, the Robert H. Smith Faculty of Agriculture, Food and Environment Sciences, the Hebrew University of Jerusalem, Israel. #4, 11,13,14,15
1996-1998:	Resident in Clinical Cardiology. University of Pennsylvania, Philadelphia;
1998-1999:	Fellow in Clinical Cardiology. University of Pennsylvania, Philadelphia. #18
2001:	Board Certified Diplomate- American College of Veterinary Internal Medicine, Specialty of Cardiology.
2003:	Certified as a Specialist in Veterinary Cardiology by The Veterinary and Herd Health Services of The State of Israel (The Ministry of Agriculture and Rural Development).
2006	Board Certified Diplomate- European College of Veterinary Internal Medicine – Companion Animals, Specialty of Cardiology.

2. Academic Appointments at the Hebrew University

Oct. 2004 – 2012	Clinical Senior Lecturer in Cardiology, the Veterinary Teaching Hospital of the Koret School of Veterinary Medicine
Oct. 2015 – to date	Clinical Senior Lecturer in Cardiology, the Veterinary Teaching Hospital of the Koret School of Veterinary Medicine

3. Additional Functions/Tasks at the Hebrew University and the Koret School

2003 - 2009	**Chairman**	Internship and Residency Committee
2003 - 2004	**Chairman**	DVM Dissertation Committee (Course 65700).
2004 - 2019	**Coordinator**	Physiology Course (Course 65709, then 65703, 1st and 2nd Semesters, 78 lecture hours, 27 practice hours, 9 laboratory hours, up to 65).
2004 - Present	**Member**	DVM Dissertation Committee (Course 65700).
2004 - Present	**Member**	Advanced Studies (DVM / PhD) at the Koret School
2004 - Present	**Member**	Internal Committee for Allocation of Research-Funds Raised through Continuing Education Courses
2004-Present	**Member**	School's Alumni Communication Committee
2008-2011	**Member**	Representing the Vet School at the Israeli Board of Veterinary Private Practitioners
2008-Present	**Member**	Ethics in Experimental Animal Research Committee, the Robert H. Smith Faculty of Agriculture, Food and

		Environment.
2009 - Present	**Member**	Internship and Residency Committee

4. Service in other Academic and Research Institutions

1991-1996:	The Neufeld Cardiac Research Institute, at the Sheba Medical Center, affiliated with The Tel-Aviv University, Israel. Staff Veterinarian and Laboratory Coordinator.
1996-1998:	Resident in Clinical Cardiology. University of Pennsylvania, Philadelphia;
1998-1999:	Fellow in Clinical Cardiology. University of Pennsylvania, Philadelphia.
2000-2003	Research Scientist in R&D, Eli Lilly and Company, Indiana, USA

5. Other Activity

Reviewer of Scientific Manuscripts and Abstracts

2000 - Present	- Journal of Toxicology and Applied Pharmacology
	- Journal of Veterinary Internal Medicine
	- Israel Journal of Veterinary Medicine
2002 - Present	- American College of Veterinary Internal Medicine Annual Forum
2004 - Present	- Veterinary Radiology & Ultrasound
2005 - Present	- Journal of American Animal Hospital Association
	- Journal of American Veterinary Medical Association
	- Journal of Veterinary Cardiology
	- Evidence-based Complementary and Alternative Medicine
2006 - Present	- European College of Veterinary Internal Medicine - Annual Conference
	- Journal of Small Animal Practice
2008 - Present	- European College of Veterinary Internal Medicine – Companion Animals, Annual Congress
2009-Present	- The Veterinary Journal
2015 - Present:	- Veterinary Research Communications

Member of Journal Review Boards

2010 – Present	- Journal of Veterinary Cardiology

Member of International Task Forces and Committees

2005-2008	American College of Veterinary Internal Medicine International

	Committee
2007-Present	European College of Veterinary Internal Medicine-Companion Animals: Member of the Recertification Committee
2007-2010	- American College of Veterinary Internal Medicine Committee for Developing Guidelines and Diagnostic Recommendations for the Echocardiographic Diagnosis and Evaluation of Canine Congenital Tricuspid Dysplasia
2008-Present	European Society of Veterinary Cardiology (ESVC): **- Board Member** & **Officer** **- Representative of the ESVC Board at the ECVIM-CA Scientific Committee** (personally in charge of planning the Cardiology Programme of the 3-day long ECVIM-CA Congress, each year) - European Society of Veterinary Cardiology Task Force for Developing a White Paper regarding Veterinary Echocardiography Recommendations and Guidelines
2009-2012	- American College of Veterinary Internal Medicine Research Committee (Acting as **Assistant Chair** in 2012)
2011-Present	- European College of Veterinary Medicine Appeal Committee (reviewing Appeals forwarded by candidates whose credential packets have been rejected by the college, as well as reviewing the process of credential packet and case-report evaluation by the college)

Awards

Apr. 1995:	The "Rena Yarom" Young Investigator's Award, The Israeli Subsection of the International Society for Heart Research, for outstanding research and presentation of a study on: "Multielectrode endocardial mapping during ventricular tachycardia in swine."
Oct. 1995:	The Mediterranean Association of Cardiology and Cardiac Surgery, the 8th Annual MACCS Congress, Limassol, Cyprus. 2nd Prize for a presentation on: "Echocardiographic guidance of radio-frequency ablation and multielectrode mapping catheters, in the swine left ventricle."
Sept. 2005:	Hospital Management Award for excelling at work and being a role model

Teaching Awards

1997 – 1999	Elected by student teaching surveys as one of the best teachers in the School of Veterinary Medicine, Department of Clinical Studies, University of Pennsylvania, Philadelphia, PA, USA (4^{th} year).
2002	Elected by a student teaching survey as the best teacher (with a score of 20.96, ranking as 1 out of 32 teaching lecturers at the school of

	Veterinary Medicine of The Hebrew University of Jerusalem, The Faculty of Agriculture, Food and Environment); Course 65750 (Small Animal Internal Medicine B), 3rd year.
2005	Elected as the most sought seminar mentor for 2003-2004

Membership in Scientific Associations

1991-Present	Israel Companion Animal Veterinary Association.
1991-1996	Israel Veterinary Medical Association; Member of the Central Committee; Representative of Veterinarians in Research and Academic Institutions in the Central Committee.
1991-1997	The International Society for Heart Research.
1992-1996	Israel Society of Imaging in Veterinary Medicine.
2000-2002	International Safety Pharmacology Society
2000-2003	The American Echocardiography Society
2001-Present	The American College of Veterinary Internal Medicine (ACVIM)
2006-Present	The European College of Veterinary Internal Medicine – Companion Animals (ECVIM-CA)

6. Research Grants

- 1997, Principal Investigator: Dr. DG. Ohad; Co-investigator: Dr. D.H. Knight. Source: Departmental Research Grant, Veterinary Hospital of the University of Pennsylvania. Subject: Serum Insulin Growth Factor-I (IGF-I) levels in feline hypertrophic cardiomyopathy. Sum: US$ 5,000.00
- 1998, Principal Investigator: Dr. M. Conzemius. Co-investigators: Dr. D.G. Ohad, Dr. D.H Knight, and Dr. C.M. Hill; Source: Monsanto Inc. Subject: The role of Growth Hormone in the pathogenesis and therapy of idiopathic canine Dilated Cardiomyopathy in Doberman pinscher dogs. Sum: US$ 10,000.00
- 2004, Principal Investigator: Dr. D. Ohad, Source: The Koret School of Veterinary Medicine (Internal Funds). Subject: "Correlating Between Peri-Operative Serum Cytokine and Histamine Plasma Levels and Post-Operative Arrhythmias, in Canine GDV."
  Sum: NIS 10, 000
- 2011, Principal Investigators: Dr. D. Ohad and Prof. Rina Meidan; Source: Research Center of Sustained Animal Health and Husbandry, the Robert H. Smith Faculty of Agriculture, Food and Environment. Subject: "Developing a Therapeutic Approach for Pulmonary Hypertension Using Specific Small Interfering RNA Targeting the Endothelin-1 System". Sum: USD 30,000
- 2020, Principal Investigators: Dr. D. Ohad, Dr. E. Eliyahu, Dr. A. Vincek, Dr. M. Katz, Dr. M. Trivieri and Dr. S. Tal. Source: The Icahn School of Medicine at the Mount Sinai Hospital, NY. Subject: "A Unique Gene Therapy Approach, Using Anc80, a Viral Vector Harboring Acid Ceramidase Gene (*ASAH1*) for the Treatment of

Reactive Pulmonary Arterial Hypertension". Sum: USD 18,600.

7. Teaching at the Hebrew University:

a) Mentoring and Supervision of Graduate Dissertations

1. 2006-2009: Amit Avrahami: Congenital heart disease in a family of Dogue de Bordeaux (Grade: 85) (**See Section 5A, Publication #28**).
2. 2007-2010: Sarit Hirschberg- Early trans-mitral inflow imaging in feline diastolic dysfunction (Grade: **95**, completed **with honors**).
3. 2008-2011: Itzhak Lenchner- Palpable right apical thrills in canine pulmonary hypertension (Grade: **93**, completed **with honors**) (**See Section 5A, Publication #30**).
4. 2008-2011: Nir Tenenbaum-Prevalence and nature of heart disease in pets admitted to the largest and only university hospital in Israel between 2004 and 2007 (Grade: 79)
5. 2009-2012: Yonatan Berkowitz - The prevalence of the cardio- renal- anemia syndrome in dogs and the effect of cardiac disease and treatment on packed cell volume and serum creatinine and potassium (Grade: 88).
6. 2010-2013: Hagit Biar. Establishment of an experimental rat model of pulmonary arterial hypertension for testing the feasibility of detecting and manipulating siRNA of endothelin-1 and its receptors in pulmonary parenchyma endothelial cells. Co-supervisors: Prof. Rina Meidan, Dr. Gila Kahila-Bargal (Grade: 78)
7. 2010 – 2012: Hila Sella, 2nd Year: The prevalence of anemia and azotemia in feline heart disease and its influence on outcome (Grade: 85).
8. 2010 – 2012: Dalit Yankovitch, 2nd Year - Do differences in demographics and in underlying etiology in various feline populations alter the outcome of systemic arterial thromboembolism? (Grade: 79)
9. 2010 –2012: Amos Shmuely, 2nd Year - Do different serum concentrations of cardiac troponin-T predict different outcome in veterinary patients with and without heart disease? (Grade: **90**).
10. 2010 –2011: Efrat Gan-Mor, 3rd Year - Does pimobendan therapy alter spectral Doppler measurements in canine secondary pulmonary arterial hypertension? (Grade: **93 with honors**).
11. 2010-2011, Yifat Segev, 4th Year - Does the addition of constant rate infusion to bolus furosemide administration to hospitalized pets with acute congestive heart failure alter medical outcome? Co-supervisor: Dr. Sigal Klainbart (Grade: 83) **(See Section 5A, Publication #35)**.
12. 2010-2013: Yuval Hazut: "Retrospective evaluation of factors associated with outcome in dogs with cardiac tamponade" (Grade: 89) **(See Section 5A, Publication #36 under revision)**.
13. 2010-2013: Neta Federman: " Effects of Diltiazem and Atenolol therapy on inotropic state, quality of life, and survival of veterinary cardiac patients" (Grade: 82).
14. 2011-2014: Liron Braun-Carmi: The impact of Pharmacotherapy for Heart Disease on Spectral Doppler Velocity Time Integral Across the Semilunar Valves" (Grade: 83).
15. 2011-2013: Maayan Bar-On: "Biogenic amines in body fluids and effusates as potential markers of neoplastic disease" (Grade: 87).
16. 2011-2016: Netta Bejarano: "A retrospective, observational analysis of

echocardiographic and clinical changes in dogs with pulmonary hypertension secondary to mitral valve disease, treated with oral sildenafil or tadalafil" (Grade: 87)

17. 2012-2015: Fanny Braslevsky Fernandes de Cruz: "Retrospective study of survival of HCM or HOCM positive cats and diagnostic parameters that can assist in achieving an accuracy prognosis" (Grade: 88).
18. 2012-2015: Noa Bar-Joseph: "A retrospective Study of Zaroxolyne Therapy of 23 Client-Owned Dogs with Right-Sided Congestive Heart Failure" (Grade: 89)
19. 2012-2014: Michal Shmilovitch Sodek, 4th year: "Preclinical Long-Term Safety Evaluation of an Intra-Ventricular Assist-Device Implanted in Sheep"; Co-supervisor: Dr. Amir Sherman (**Grade: 97**).
20. 2014 - present: Rachel Paz. Quality of Life in Dogs with Heart Disease (co-supervisors: Drs. Gila Zur and Gila Sutton).
21. 2015-2017: Reut Lifshitz Maor, 3rd year: "Is a sonographic measurement of the left atrium by critical care veterinarian, similar enough to a later assessment by a cardiologist?"; Co-supervisor: Dr. Yaron Bruchim (Grade: 89).
22. 2015-2017: Maor Goldman, "Does an acute, non-invasive elevation in preload enhance the identification of left ventricular diastolic dysfunction?" (Grade: **91**).
23. 2017 – present: Ron Binyamini. A comparison between dogs with heart disease: do those with a murmur differ from those without one?
24. 2017-present: Daniel Posner :An echocardiographic comparison of three canine populations afflicted with three different types of dilated cardiomyopathy, to seek findings unique to each group.
25. 2017-present: Roni Yihie. Characteristics and outcome of a dog population with congenital patent ductus arteriosus (PDA), diagnosed and treated medically or surgically over the past decade.
26. 2017-present: Nofar Perelman. A retrospective comparison of dogs with mitral regurgitation in which the systolic pressure gradient is normal, and those in which the gradient is lower than normal
27. 2018- present: Dana Balgin; Demographic, clinical, and echocardiographic characteristics of Dogue de Bordeaux dogs with Atrial fibrillation: the Israeli experience.

Supervision of Advanced Degree Trainees

a) Dr. Yael Golani, Resident in Cardiology, May1st 2010-April 30, 2013

c) **Post-doctoral Fellows and Visitors**:

Dr. Lora Kohenhemzi, Turkey, 2006
Dr. Anthony Zambelli, South Africa, 2011, 2013
Dr. Ta-Li Lu, Taiwan, 2013
Dr. Mike Martin, the UK, 2013
Dr. Iuliu Scurtu, Romania, 2015
Dr. Theodoros N. Sinanis, Greece, 2017
Dr. Andrei Radu Baisan, Rumania, 2017
Prof. Christos K. Koutinas, Greece, October, 2018 through January 2019
(A Sabbatical visit).

d) **<u>Courses taught</u> at the Koret School of Veterinary Medicine** (All courses except for #65721 are obligatory and all support the DVM degree at the KSVM)**:**

March 2003- Present:

Small Animal Internal Medicine B (65750), Clinical Cardiology, 2nd Semester of the 3rd Year - 18 hours. Other teachers in this course: Drs. Bark, Baneth, Harrus, Ofri, Shamir, Bruchim, Klainbart, Dank, and Zur.

Equine medicine and Surgery B (65753), Equine Cardiovascular Medicine taught at the 2nd semester of the 3rd Year – 6 frontal hours & 3 laboratory hours. Other teachers in this course: Drs. Levy, Singer, Steinman, and Sutton.

Clinical Small Animal Internal Medicine (65763), Applied Cardiovascular Medicine, 4th year, - 20 hours (7 weeks/year). Other teachers in this course: Drs. Aroch, Bark, Baneth, Harrus, Klainbart, Lavy, Shamir, Yas, Kouzi, and Zur.

Practical Small Animal Cardiology & Ophthalmology Rotation (previously 65827, and now 65828), 4th year - 20 hours/week (28 weeks/year). Other teachers in this course: Dr. Ofri.

Practical Small Animal Cardiology & Dermatology Rotation (65837), 4th year - 20 hours/week (up to 4 weeks/year). Other teachers in this course: Dr. Gila Zur.

Practical Small Animal Cardiology & Oncology Rotation (65838), 4th year - 20 hours/week (up to 4 weeks/year). Other teachers in this course: Dr. Gillian Dank.

Veterinary Clinical Cardiology Rotation (65841), 4th year, 40 hours/week, 18-26 weeks per year.

Veterinary Radiology (65804); Cardiovascular Diagnostic Imaging, 4th year - 2 hours/week (14 weeks/year). Other teachers in this course: Drs. Aizenberg, Kushnir, and Shub.

Clinical Methods B (65824): Cardiorespiratory Physical Examination, 2nd year, 3 frontal hours & 3 laboratory hours per year. Other teachers in this course: Drs. Bruchim, Tovi, Barak, Shilo, Epstein, Klainbart, Shamir, Aroch, Zur, Bar-Itzhak.

Student Seminar in Veterinary Medical Topics (65729, 65747, 65783, and 65787), 1st, 2nd, 3rd, and 4th year, 10 annual hours on

average, 1st & 2nd semesters. Other teachers in course: all hospital clinicians (under Drs. Shamir & Steinman's responsibility & coordination).

Clinical Pharmacology (65754), 3rd year, 2nd semester, 6 hours. Other teachers include Drs. Lavy, Dank, Shpigel, Steinman, Sobek, and Ofri.

Participation in designing and executing **final Graduation Examinations (Course 65833) for senior students**.

2004 - 2010 **Coordinator** of a Veterinary System's Physiology Course (Course 65703), 1st Year, 2nd Semester, 42 hours, 45 students. Course teachers: Fleidervish, Gutnick, Harrus, Bark, Mazrier, Bor

2006-Present: **Advanced Elective Cardiology Diagnostic Testing Workshop** (65721), 3rd year, 2nd semester, 3 hours a week, (5 weeks/year). No other teachers in this course.

2007-Present Proseminar B (Animal Science), 2nd semester for 3rd year graduate students of Animal Science (71854), 8 hours.

2010 and on: **Coordinator** of a Veterinary System's Physiology Course (Course 65703, 1st and 2nd Semesters, 78 hours, ≤ 65 students). Other teachers in this course other than myself: Profs. Harrus, Shahar, Lavy. Shamir; Drs. Chai, Klainbart, Kuzi, Segev, Shilo, Raz, Donenfeld-Sela, and Berlin.

Other Teaching Experience:

20 July 1994: Teaching practical porcine anesthesia and coronary catheterization in a "hands-on" workshop at the University of California, San Francisco Medical Center, conducted for investigators from multiple electrophysiology laboratories throughout the USA by EP Technologies, Sunnyvale, CA; 8 hours

Sept. 1994-July 1996: The Animal Harcum College, "AMAL" School Network, Rehovot, Israel; Applied Electrocardiography, taught to veterinary technology (nursing) students; 4 annual hours).

2009-present The Hebrew University's Magid Institute Animal Harcum College; Cardiovascular physical examination and electrocardiography, taught to veterinary technology (nursing) students; 3 annual hours.

2011:	Cardiac Physiology, 6 hours taught in English to international students at The Division for International Studies of the Robert H. Smith Faculty of Agriculture, Food and Environment.
November 2011	Abdominal and cardiac ultrasound workshop (6 hours) taught to 42 (25 German and 17 Israeli) Veterinary Medical Students on September 28-29, 2013, on behalf of the German and Israeli Veterinary Friendship Association ("Deutsch Israelische Tierärzte Gesellschaft" -אגודת ידידות רופאים וטרינריים ישראל-גרמניה).
October 7th, 2013	Abdominal and cardiac ultrasound workshop (6 hours) taught to 48 (26 German and 22 Israeli) Veterinary Medical Students on September 28-29, 2013, on behalf of the German and Israeli Veterinary Friendship Association ("Deutsch Israelische Tierärzte Gesellschaft" -אגודת ידידות רופאים וטרינריים ישראל-גרמניה).

Post Graduate Courses taught outside the Hebrew University:

Sept. 1996-1999:	Conducting clinical cardiology and electrocardiography frontal "rounds", 4th year students and rotating interns(n=6), 12 hours/week, 50 weeks/year. The School of Veterinary Medicine, Department of Clinical Studies, University of Pennsylvania, Philadelphia, PA.
March 1998:	Clinical Pharmacology Course, Clinical Cardiovascular Pharmacology, 3rd year students (n=110), 7 hours. The School of Veterinary Medicine, Department of Clinical Studies, University of Pennsylvania, Philadelphia, PA.

Current Clinical Responsibilities

2003-present	Leading the Clinical and Referral Cardiology Service of the Koret Veterinary University Hospital that offers physical examination with emphasis on cardiac auscultation and the cardiovascular system, up to 10-lead surface electrocardiography, thoracic radiography, blood pressure measurement, ambulatory electrocardiography (Holter) monitoring over 24 hours at the patient's home environment, echocardiography-cardiac ultrasound (including color and spectral Doppler), intra-cardiac permanent pacemaker implantation, trans-thoracic temporary cardiac pacing, therapeutic cardiac catheterization of select congenital heart diseases, hands-on involvement in cardiovascular and thoracic surgery, responsibility for referred cases, appointments, "walk-in" cases, emergency "pick-up" cases, cases transferred from other departments, in-house cardiac consultations to other hospital departments such as Internal Medicine, Critical Care,

	Anesthesia, and Equine Medicine, national and international "Telemedicine" cardiac consultation. http://vethospital.huji.ac.il/clinical_departments/cardiology/staff.php http://ksvm.agri.huji.ac.il/staff/ohad_dan.htm
2003-present	24h, 7d/week Cardiology On-Call duty at the emergency service of the Veterinary University Hospital.

Clinical Achievements

- First echocardiographic diagnosis of congenital ventricular septal defect in a horse in Israel
- First identification of congenital sub-aortic stenosis and tricuspid dysplasia in several offspring of a particular Dogue de Bordeaux dog breeder in Israel.
- Identification of the mode of inheritance (autosomal recessive) of sub-aortic stenosis and tricuspid dysplasia in the Dogue de Bordeaux breed
- Diagnosis of first 5 cases of Feline Endomyocarditis in Israel.
- Diagnosis of first case of canine Cor Triatriatum Dexter in Israel.
- Diagnosis of first case of congenital canine Common Atrium in Israel, with incomplete atrioventricular canal and right-to-left shunting of blood triggered by cardiac tamponade.

Performed the first **57** minimally invasive cardiac catheterizations in the country:

- Implantation of the first **31** cardiac pacemakers in client-owned veterinary patients in Israel
- Implantation of the first clinical **vagal stimulator** to treat a client-owned veterinary patient suffering from atrial fibrillation
- Performance of the first (and so far only) **28** percutaneous balloon valvuloplasty procedures of client-owned canine congenital pulmonic stenosis.
- Implantation of the first **11** Amplatzer Canine Ductal Occluder devices in client-owned dogs with congenital patent ductus arteriosus.
- Involvement in the first molecular identification of two specific Bartonella species from valves of dogs with canine infective endocarditis, and in the first report of one of these two species in dogs in general
- Using data from 201 dogs to show that a loud right-sided systolic murmur with a palpable thrill is highly predictive of the later diagnosis of pulmonary arterial hypertension in dogs with Doppler evidence of tricuspid regurgitation.
- Involvement in the management of the first-ever published canine case of traumatic urothorax.
- Co-authored a series of four peer-reviewed publications regarding the clinical significance and practical usage of sleeping respiratory rate monitoring in the home environment of both healthy and sick dogs and cats.
- Leading a project that identified the mode of inheritance, as well as three ansectors in the local breeding population, of two congenital heart defects (Tricuspid Valve Dysplasia and Subaortic Stenosis) in the Dogue de Bordeaux breed.

LIST OF PUBLICATIONS

1. **Doctoral Dissertation:** Endocardial mapping of ventricular tachycardia foci with a percutaneously introduced multielectrode catheter, to facilitate radio-frequency ablation, supervised by Profs. Micha Eldar and Hylton Bark, 1997 (see Section 5A, publications #4,11,13,14,15).

2. **Books:** none

3. **Books Edited**: none

4. **Chapters in Collections**:
    - **a.** Shalhav A., Ramon J., Goldwasser B., **Ohad D.**, Nativ O., Cherniack R., and Zajdel L. (1994). Radiofrequency needle hyperthermia of normal and cancerous animal tissue. In: Progress in Biomedical Optics EUROPTO Series, the Society of Photo-Optical Instrumentation Engineers, Proceedings of Medical Applications of Lasers II; 2327:226-233.
    - **b.** Shlosberg A., **Ohad D.G.**, Bellaiche M., and Perl S. (1998). Monitoring of Physiological and Pathological Changes in Turkey Poults Fed Leaves of Potentially Cardiomyotoxic Nerium oleander and Persea americana Toxic Plants and Other Natural Toxicants. In CAB International, Tam Garland & A. Catherine Barr (Eds.): Wallingford, UK; Chapter 28: pp. 131-136.

Since appointment in 2015:

- **c.** **Ohad, D.G.**, (2017). Pallor. In: Textbook of Veterinary Internal Medicine, 8th Edition. Stephen J. Ettinger, Edward C. Feldman, Côté E. Chapter 50: pp. 206-208.
- **d.** **Ohad, D.G.**, (2017).Treatment of systemic hypertension. In: Textbook of Veterinary Internal Medicine, 8th Edition. Stephen J. Ettinger, Edward C. Feldman, Côté E, Chapter 158: pp. 666-670.

5. **Articles published in peer-reviewed journals**

Legend:
PI – Principal Investigator; C – Co-researcher; S – student; T – technician.
Numbers in parentheses at end of each item denote Impact Factor; ranking of journal in journal category; and number of times the article has been cited.
* Most important articles since last appointment.

A. Original research papers:

1. Goldwasser B. (PI), Ramon J. (C), Engelberg S. (C), **Ohad D. (C)**, Sharkey H. (C), Strul B. (C), Rasor J. (C), and Edwards S. (C). (1993). Transurethral needle ablation (TUNA) of the prostate using low-level radiofrequency energy: an animal experimental study. *European Urology* 24:400-405 (1.798; 17/47; 36)

2. Rosenschein U. (PI), Rozenszajn L. (C), Bernheim J. (C), Frimerman A. (C), **Ohad D.** (C), Keren G. (C), Roth D. (C), and Miller H. (C). (1993). A new coronary ultrasound angioplasty device: study of acute effects in-vivo. *European Heart Journal* 14 (suppl.):II-IV (6.131; 4/66; 0)

3. Meltzer RS. (PI), **Ohad D.** (C), Reisner S. (C), Sucher E. (C), Kaplinsky E. (C), Motro M. (C), Battler A. (C), and Vered Z. (C). (1994). Quantitative myocardial ultrasonic integrated backscatter measurements during contrast injections. *Journal of the American Society of Echocardiography* 7:1-8 (1.524; 26/66; 6)

4. Eldar M. (PI), **Ohad D.** (S), Bor A. (C), Varda-Bloom N. (T), Swanson D. (C), and Battler A. (C). (1994). A closed chest pig's model of sustained ventricular tachycardia. *Pacing and Clinical Electrophysiology (PACE)* 17:1603-1609 (1.350; 32/66;38)

5. Kornowski R. (C), Glikson M. (PI), **Ohad D. (C)**, Varda-Bloom N. (T), and Battler A. (C). (1994). Electrical injury in the femoral artery of rabbits as a model for arterial thrombosis. A pilot study. *Angiology* 45(4): 295-300 (0.858; 39/52;10)

6. Hasdai D. (PI), Fuchs L. (S), **Ohad D. (C)**, and Battler A. (C). (1994). The applicability of color-labeled microspheres in a rabbit model of ischemia-reperfusion. *Angiology* 45(6): 461-467 (0.858; 39/52; 0)

7. Beker B. (C), Vered Z. (C), Varda-Bloom N. (T), **Ohad D. (C)** , Battler A. (C), and Di Segni E. (PI). (1994). Decreased thickening of normal myocardium with transient increased wall thickness during stress echocardiography with atrial pacing. Journal of the *American Society of Echocardiography* 7(4): 381-387 (1.524; 26/66;16)

8. Kornowski R. (PI), Glikson M. (C), Hasdai D. (C), Chernine A. (S), **Ohad D.** (C), and Battler A. (C). (1994). Low molecular weight heparin (Fragmin®) prevents early reocclusion following femoral artery thrombolysis with rt-PA in rabbits. *European Heart Journal* 15:541-546 (6.131; 4/66; 3)

9. Eilat S. (S), Oestraicher Y. (C), Rabinkov A. (C), **Ohad D. (C)**, Mirelman D. (PI), Battler A. (C), Eldar M. (C), and Vered Z. (1995) Alteration of lipid profile in hyperlipidemic rabbits by allicin, an active constituent of garlic. *Coronary Artery Disease* 6(12): 985-990.(1.250; 30/52; 57)

10. Battler A (PI), Hasdai D (C), Goldberg I. (C), **Ohad D (C)**, Di Segni E (C), Bor A (C), Varda-Bloom N (T), Vered Z (C), Kornowski R (C), Lake M (C), Nass D (C), and Savion N. (C). (1995). Exogenous insulin-like growth factor II enhances post-infarction regional myocardial function in swine. *European Heart Journal* 16(12): 1851-1859 (6.131; 4/66; 14)

11. Eldar M (PI), Fitzpatrick AP (C), **Ohad D** (S), Smith MF (C), Hsu S (C), Whayne JG (C), Vered Z. (C), Rotstein Z. (C), Kordis T. (C), Swanson D.K. (C), Chin M. (C), Scheinman M.M. (C), Lesh M.D. (C), and Greenspon A.J. (C). (1996). Percutaneous multielectrode endocardial mapping during ventricular tachycardia in the swine model. *Circulation* 94(5): 1125-30 (10.255; 1/66;42)
http://circ.ahajournals.org/cgi/content/full/94/5/1125

12. Hasdai D (PI), Varda-Bloom N (T), Blumberg N (S), **Ohad D (C)**, Kornowski R (C), and Battler A (C). (1996). The effect of low molecular weight heparin (Fragmin) on myocardial neutrophil accumulation and infarct size in a rat model of myocardial infarction. *Angiology* 47(5):491-499 (0.858; 39/52; 0)

13. **Ohad DG** (S), Vered Z. (C), Caminker R (T), and Eldar M (PI). (1997). Echocardiographic imaging of a basket catheter for mapping and ablation of ventricular tachycardia in pigs. *Journal of the American Society of Echocardiography* 10(5): 505-10 (1.524; 26/66; 0)

14. Eldar M (PI), **Ohad DG** (S)**,** Goldberger J.J. (C), Rotstein Z. (C), Hsu S. (C), Swanson D.K. (C), and Greenspon AJ (C). (1997). A transcutaneous multielectrode basket catheter for endocardial mapping and ablation of ventricular tachycardia in the pig. *Circulation* 96:2430-2437 (10.255;1/66;37)
http://circ.ahajournals.org/cgi/content/full/96/7/2430 **(**title page including a remark regarding the **equal contribution of the first 2 authors** to the study)

15. Eldar M. (PI), **Ohad D.G.** (S). Greenspon A.J. (C), Goldberger J.J. (C), and Rotstein Z. (C). (1997). Percutaneous multielectrode endocardial mapping and ablation of ventricular tachycardia in the swine model. *Advances in Experimental Medicine & Biology* 430:313-321 (0.513; 64/74;1)

16. DiSegni E (C), Preisman S (C), **Ohad DG (C)**, Battler A (C), Boyko V (C), Kaplinsky E (C), Perel A (C), and Vered Z (PI). (1997). Echocardiographic left ventricular remodeling and pseudohypertrophy as markers of hypovolemia. An experimental study on bleeding and volume repletion. *Journal of the American Society of Echocardiography* 10(9): 926-36 (1.524; 26/66;25)

17. Scheinowitz M. (PI), Kotlyar A (S), Zimand S (C), **Ohad D (C)**, Leibovitz I (S), Bloom N (T), Goldberg I (C), Nass D (C), Engelberg S (C), Savion N (C), and Eldar M (C). (1998). Basic fibroblast growth factor induces myocardial hypertrophy following acute

infarction in rats. *Experimental Physiology* 83(5): 585-93 (1.695; 26/73; 22)

18. Reich M.R. (C), **Ohad DG** (PI), Overall K.L. (C), and Dunham A.E. (C). (2000). Electrocardiographic assessment of anti-anxiety medication in dogs and correlation with serum drug concentration [published erratum appears in J Am Vet Med Assoc 2000 Jun 15; 216(12): 1936]. *Journal of the American Veterinary Medical Association*. 216(10): 1571-5 (1.250; 22/129;28)

19. Varda-Bloom N. (S), Leor J. (C), **Ohad DG (C)**, Hasin Y. (PI), Amar M. (C), Fixler R. (C), Battler A. (C), Eldar M. (C), and Hasin D. (C). (2000). Cytotoxic T lymphocytes are activated following myocardial infarction and can recognize and kill healthy myocytes in vitro. *Journal of Molecular & Cellular Cardiology* 32(12): 2141-2149 (4.091; 6/66;87)

20. Bank I. (PI), Hardan I. (C), Lokshin E. (C), Nas D. (C), Miron S. (C), **Ohad D.** (C), Spong S. (C), and Garrod DR. (C). (2000). Parenteral administration of an activating monoclonal antibody to the alpha1beta1 integrin in dogs. *Immunobiology* 202(3): 239-253 (1.319; 87/119; 3)

21. Scheinowitz M. (PI), Kotlyar A.A. (S), Zimand S. (C), Leibovitz I. (S), Varda-Bloom N. (T), **Ohad D (C)**, Goldberg I. (C), Engelberg S. (C), Savion N. (C), and Eldar M. (C). (2002). Effects of basic fibroblast growth factor on left ventricular geometry in rats subjected to coronary occlusion and reperfusion. *Israel Medical Association Journal* 4(2):109-113 (0.628; 85/107, 14).

22. Gill RM (C), Jones BD (C), Corbly AK (C), **Ohad DG** (C), Smith GD (C), Sandusky GE (C), Christe ME (C), Wang J, Shen W (PI). (2006). Exhaustion of the Frank-Starling mechanism in conscious dogs with heart failure induced by chronic coronary microembolization. *Life Sciences* 4;79(6):536-544. (2.583; 33/83**;** 19)

23. **Ohad DG** (PI), Sinai Y, Zaretsky A (C), Shofti R (C). (2008) Ventricular rate control using a novel vagus nerve stimulating system in a dog with chronic atrial fibrillation. *Journal of Veterinary Cardiology* 10(2):147-154 (5) (Did not have an impact factor in 2008 ;5).

24. Segev G (PI), **Ohad DG** (C), Shipov A (C), Kass PH (C), Aroch I (C). (2008). Cardiac arrhythmias and serum cardiac troponins in Vipera palaestinae envenomation in dogs. *Journal of Veterinary Internal Medicine* 22(1):106-113 (1.885; 13/135**;**20)

25. **Ohad DG** (PI), Morick D (C), Avidor B (C), Harrus S. (2010). Molecular detection of Bartonella henselae and Bartonella koehlerae from aortic valves of Boxer dogs with infective endocarditis. *Veterinary Microbiology* 141(1-2):182–185 (2.37; 5/135**;**28)

26. Veloso GF (C), **Ohad DG** (C), Francis AJ (C), Vaughan JM (C), Brownstein DG (C), Culshaw GJ (C), Vale WW (C), French AT (C), Jamieson PM (PI). (2011) Expression of

urocortin peptides in canine myocardium and plasma. *The Veterinary Journal* 188(3):318-324 (2.165; 15/135; 3).

27. Rishniw M (C), Ljungvall I (C), Porciello F (C), Häggström J (C), **Ohad DG** (PI). (2012) Sleeping respiratory rates in apparently healthy adult dogs. *Res Vet Sci* 93(2):965-969. (1.511; 5; 11)

28. **Ohad DG** (PI), Avrahami A (S), Waner T (C), David L (C) (2013). The occurrence and suspected mode of inheritance of congenital subaortic stenosis and tricuspid valve dysplasia in Dogue de Bordeaux dogs. *The Veterinary Journal* 197(2):351-357. (2.165; 15/135; 8).

29. **Ohad DG** (PI), Rishniw M (PI), Ljungvall I (C), Porciello F (C), Häggström J (C) (2013). Sleeping and resting respiratory rates in dogs with subclinical heart disease. *J Am Vet Med Assoc.* 15;243(6):839-843.(1.72; 22/129;9)

30. **Ohad DG** (PI), Lenchner I (S), Bdolah-Abram T (C), Segev G (C) (2013). A loud right-apical systolic murmur is associated with the diagnosis of secondary pulmonary arterial hypertension: retrospective analysis of data from 201 consecutive client-owned dogs (2006-2007). *The Veterinary Journal* 198(3):690-695. (2.165; 15/135;8)

31. Ljungvall I (C), Rishniw M (C), Porciello F (C), Häggström J (C), **Ohad D** (PI) (2014). Sleeping and resting respiratory rates in healthy adult cats and cats with subclinical heart disease. *J Feline Med Surg*. 16(4):281-290. (1.219; 43/129; 13)

32. Ljungvall I (C), Rishniw M (C), Porciello F (C), Ferasin L (C), **Ohad DG** (PI) (2014). Murmur intensity in small- breed dogs with myxomatous mitral valve disease reflects disease severity. *J Small Anim Pract*. 55(11):545-550. (0.907; 65/129;17)

Since appointment in 2015

33. *Porciello F (C), Rishniw M (C),.Ljungvall I (C), Ferasin L (C), Häggström J (C), **Ohad DG** (PI). (2016). Sleeping and resting respiratory rates in dogs and cats with medically-controlled left-sided congestive heart failure. *The Veterinary Journal* 207 164–168. (2.165; 15/135;4)

34. Fox PR (PI), Keene BW (C), Lamb K (C), Schober KA (C), Chetboul V (C), Luis Fuentes V (C), Wess G, Payne JR (C), Hogan DF (C), Motsinger-Reif A (C), Häggstrom J (C), Trehiou-Sechi E (C), Fine-Ferreira DM (C), Nakamura RK (C), Le PM (C), Singh MK (C), Ware WA (C), Abbott JA (C), Culshaw G (C), Riesen S (C), Borgarelli M (C), Lesser MB (C), Van Israel N (C), Cote E (C), Rush JE (C), Bulmer B (C), Santilli RA (C), Vollmar AC (C), Bossbaly MJ (C), Quick N (C), Bussadori C (C), Bright JM (C), Estrada AH (C), **Ohad DG** (C)**,** Fernandez-Del Palacio MJ (C), Lunney Brayley J (C), Schwartz DS (C), Bove CM (C), Gordon SG (C), Seung Woo Jung (C), Brambilla P (C),

Moïse NS (C), Stauthammer CD (C), Stepien RL (C), Quintavalla C (C), Amberger C (C), Manczur F (C), Yong-Wei Hung (C), Lobetti R (C), De Swarte M (C), Tamborini A (C), Mooney CT (C), Oyama MA (C), Komolov A (C), Fujii Y (C), Pariaut R (C), Uechi M (C), Yukie V (C), Tachika Ohara (C). (2018). International collaborative study to assess cardiovascular risk and evaluate long-term health in cats with preclinical hypertrophic cardiomyopathy and apparently healthy cats: The REVEAL Study. *Journal of Veterinary Internal Medicine*, 32(1): 1-14. (2.185; 12/140; 15)

35. * **Ohad D** (PI), Segev Y (C), Kelmer E (C), Aroch I (C), Bdolah-Abram T (C), Segev G (C), Klainbart S (C) (2018). Constant rate infusion vs. intermittent bolus administration of IV furosemide in 100 pets with acute left-sided congestive heart failure: A retrospective study. *The Veterinary Journal* 238:70-75. (1.773; 26/140; 0)

36. ***** Fox PR (PI), Keene BW (C), Lamb K (C), Schober KE (C), Chetboul V (C), Luis Fuentes V (C), Payne JR (C), Wess G (C), Hogan DF (C), Abbott JA (C), Häggström J (C), Culshaw G (C), Fine-Ferreira D (C), Cote E (C), Trehiou-Sechi E (C), Motsinger-Reif AA (C), Nakamura RK (C), Singh M (C), Ware WA (C), Riesen SC (C), Borgarelli M (C), Rush JE (C), Vollmar A (C), Lesser MB (C), Van Israel N (C), Lee PM (C), Bulmer B (C), Santilli R (C), Bossbaly MJ (C), Quick N (C), Bussadori C (C), Bright J (C), Estrada AH (C), **Ohad DG** (C), Del Palacio MJF (C), Brayley JL (C), Schwartz DS (C), Gordon SG (C), Jung S (C), Bove CM (C), Brambilla PG (C), Moïse NS (C), Stauthammer C (C), Quintavalla C (C), Manczur F (C), Stepien RL (C), Mooney C (C), Hung YW (C), Lobetti R (C), Tamborini A (C), Oyama MA (C), Komolov A (C), Fujii Y (C), Pariaut R (C), Uechi M (C), Yukie Tachika Ohara V (C) (2019). Long-term incidence and risk of noncardiovascular and all-cause mortality in apparently healthy cats and cats with preclinical hypertrophic cardiomyopathy. *Journal of Veterinary Internal Medicine*, 33(6):2572-2586. (2.185; 12/140; 0)

37. **Ohad, DG**, Segev, G, Hazut, Y, Golani, Y, Bruchim, Y, Klainbart, S, Milgram, J, Aroch, I, and Kelmer, E. Retrospective Evaluation of Clinical, Clinicopathological and Echocardiographic Findings Associated with Survival in 108 Dogs with Cardiac Tamponade. *Israel Journal of Veterinary Medicine* (2020), 75 (3):133-141**.**

B. Clinical Observations and Case Reports:

1. Aroch I. (C), Ohad **D.G.** (C), and Baneth G. (C). Paresis and unusual electrocardiographic signs in a severely hypomagnesaemic, hypocalcaemic lactating bitch. *Journal of Small Animal Practice* 39(6): 299-302 (1998). (0.704; 48/129; 1)

2. **Ohad D.G**. (PI), Baruch S (C), and Perl S (C). Incomplete atrioventricular canal complicated by cardiac tamponade and bidirectional shunting in an adult dog. *Journal of the American Animal Hospital Association* 43(4):221-6 (2007). (0.968; 51/135;0).

3. Waner T (C), **Ohad DG** (PI). Apparent atrial parasystole associated with *Ehrlichia canis* infection in a dog. A clinical case report. *Israel Journal of Veterinary*

Medicine, 63:116-121, (2008) (0.256; 114/135; 3).

4. **Ohad D (PI)**, Sinay Y (C), Carmi B (C), Zaretsky A (C), Shofti R (C). Chronic vagal stimulation for ventricular rate control in a dog with atrial fibrillation. *Israel Journal of Veterinary Medicine*, 63(3):94-100, (2008) (0.256; 114/135; 0).

5. Klainbart S (C), Merchav R (C), **Ohad DG** (PI). Traumatic urothorax in a dog: a case report. *Journal of Small Animal Practice* 52(10):544-546 (2011). (0.704; 48/129; 4)

6. Joseph R (S), **Ohad D (C)**, Dank G (C), Blum S (C), Loeb E (C), Migram J (PI). Heart base abscess caused by *Prevotella oralis* in a dog. *Israel Journal of Veterinary Medicine* 69(1): 24-28 (2014) (0.2; 114/135; 1).

Since appointment in 2015

7. Oron L (PI), **Ohad DG (C)**, Kelmer E (C), Dahan Y (C), Bruchim Y (C). Transient Atrioventricular Block Associated with Acute Pancreatitis in a Japanese Chin Dog. *Israel Journal of Veterinary Medicine* 70(3):58-63 (2015) (0.35; 114/135; 0).

8. *Scurtu I (PI), Tabaran FA (PI), Mircean M (C), Giurgiu G (C), Nagy AL (C), Catoi C (C), **Ohad D** (PI). Combined double chambered right ventricle, tricuspid valve dysplasia, ventricular septal defect, and subaortic stenosis in a dog. *BMC Veterinary Research* (2017), 13(1): 367-374. (1.96; 20/140;0)

9. Klainbart S (C), and **Ohad D (PI)**. Knocking on heaven's door: a left-atrial ball-like thrombus in a cardiomyopathic cat with cardiomyopathy, atrial fibrillation and triplegia. Accepted for publication at the *Israel Journal of Veterinary Medicine* (2018), 73(3):33-38. (0.3; 114/135; 0)

10. Berlin N (C), **Ohad D (PI)**, Maiorkis I (C), Klainbart S (C), and Kelmer E (**Co-PI**). Successful short and long-term management of ventricular fibrillation, cardiopulmonary arrest, and ventricular tachycardia, using defibrillation, cardiopulmonary resuscitation, and intravenous amiodarone in a cat. *Journal of Veterinary Emergency and Critical Care*, 2018 (Accepted).

11. Merhavi N (PI), Atamna R (C), Peery D (C), **Ohad DG (C)**, and Yudelevitch S (C). Cardiac Auricular Hemangiosarcoma Resection in a Dog. *Israel Journal of Veterinary Medicine* (2019),74(2):102-106, 2019, (0.3; 114/135; 0)

12. Scurtu I, Taulescu M, Scurtu L, Vilcu M, Toma C, Marchis H, **Ohad DG.** Obstructive right ventricular outflow tract myxosarcoma in an adult dog. *Journal of Veterinary Cardiology* (2020),29:47-53. doi: 10.1016/j.jvc.2020.04.001. Epub 2020 May 4.PMID: 32464578

13. Vilcu M, Scurtu I, **Ohad DG**, Papuc I, Scurtu L, Tabaran F. Canine infantile left ventricular noncompaction. *BMC Veterinary Research* (2020) 23;16(1):255-260. doi: 10.1186/s12917-020-02480-7.PMID: 32703195

C. Letters:

1. **Ohad DG.** Morphology of ventricular arrhythmias in the Boxer as measured by 12-lead electrocardiography with pace-mapping comparison. *Journal of Veterinary Internal Medicine* 16(4):391-392 (2002). (1.583; 8/128: 0)

D Other Publications

A. **Ohad D** (PI). Writer of an article series titled **"QRS: It's Not Complex!"** an on-going ECG tutorial in the *Israel Journal of Veterinary Medicine;* 56(3):123-124, (2001). (0.256; 114/135; 0).

B. **Ohad D** (PI). Two continuing education articles **("Ventricular Fibrillation"** and "**Chaga's Disease**") in veterinary clinical cardiology for **VetStream®,** an encyclopedic, peer-reviewed source of clinical veterinary medical information delivered on CD-ROM (2002).

C. Hirschberg S (S). Koffas H (C), Bdolah-Abram T (C), Dukes-McEwan J (C), Corcoran B (C), French A (C), Simpson K (C), **Ohad, D** (PI); Doppler imaging of a spontaneously occurring feline diastolic dysfunction. *Israel Journal of Veterinary Medicine*; 63(3):91, (2008) (0.256; 114/135; 0).

D. Lenchner I (S), Bdolah-Abram T (C), **Ohad D** (PI). Physical examination to predict the outcome of canine pulmonary hypertension. *Israel Journal of Veterinary Medicine*, 63(3):92, (2008) (0.256; 114/135; 0).

E. Avrahami A (S), David L (C), **Ohad D** (PI). Congenital heart disease in the Dogue de Bordeaux breed. *Israel Journal of Veterinary Medicine*, 63(3):93, (2008) (0.256; 114/135;0).

F. **Ohad D (PI)**. An asymptomatic dog with potentially severe heart disease. What is your diagnosis?" *Israel Journal of Veterinary Medicine;* 65(1):34-36, (2010) (0.256; 114/135; 0).

G. Golani Y (C), and **Ohad DG (PI)**. ECG of the Month. *Israel Journal of Veterinary Medicine*, 65(3):117-120, (2010) (0.256; 114/135; 0).

G. Golani Y (S), **Ohad D (PI)**. Evaluation of occasional, sudden, unprovoked, episodes of ataxia and acute collapse. What's your diagnosis? *Israel Journal of Veterinary Medicine* 66(2):51-55 (2011) (0.256; 114/135; 0).

6. Participation in Scientific Conferences, Lectures and Other Activity

Moderating Scientific Sessions in International Conferences

2008 Moderating 2 hours of scientific abstract at the ACVIM Forum, San Antonio, TX,
2009 Moderated 4 hours of scientific abstract presentations at the ECVIM-CA Congress, Porto, Portugal
2010 Moderating a 2 hour panel discussion titled "What is your recommended screening modality for feline hypertrophic cardiomyopathy". ECVIM-CA Congress, Toulouse, France.
2011 Moderating a 2 hour panel discussion titled "Genetics of canine dilated cardiomyopathy", ECVIM-CA Congress, Seville, Spain.
2012 Moderating Abstract Sessions at the ACVIM Forum, New Orleans, LA, USA
2013 Attending the ACVIM Forum, Seattle, WA, USA
2013 Moderating Abstract Sessions at the ECVIM-CA Congress, Liverpool, UK
2014 Attending the ACVIM Forum, Nashville, TN, USA
2014 Moderating Abstract Sessions at the ECVIM-CA Congress, Mainz, Germany
2015 Attending the ACVIM Forum in Indianapolis, IN, USA
2015 Moderating Abstract Sessions at the ECVIM-CA Congress, Lisbon, Portugal
2016 Attending the ACVIM Forum, Denver, CO, USA
2016 Moderating Abstract Sessions at the ECVIM-CA Congress, Goteborg, Sweden
2017 Attending the ACVIM Forum, National Harbor, MD, USA
2017 Moderating Abstract Sessions at the ECVIM-CA Congress, Saint Julian's, Malta
2018 Attending the ACVIM Forum, Seattle, WA, USA
2018 Moderating Invited lectures at the ECVIM-CA Congress, Rotterdam, Holland
2019 Attending the American Society of Echocardiography (ASE), Portland, OR, USA
2019 Moderating Invited lectures at the ECVIM-CA Congress, Milan, Italy
2020 Remotely Moderating Invited lectures at the ECVIM-CA Congress, Barcelona, Spain

6.1. International Conferences

6.1.1 Invited lectures

1. **Ohad D**. "Secrets of the mean electrical axis: how to tell normal from abnormal in just a brief glance", the American College of Internal Veterinary Medicine Forum, Baltimore, MD. 2005.

2. **Ohad D**. "Small animal cardiac radiography interpretation based on familiarity with cardiac anatomy and physiology", TSAVA Anadolum Congress, Istanbul, Turkey. 2007.

3. **Ohad D**. "A loud right apical systolic murmur can predict the diagnosis of canine pulmonary hypertension. The Veterinary Cardiovascular Society Meeting,

Loughborough University, United Kingdom. 2008

4. **Ohad D**. "The role of laboratory tests in decision making in small animal cardiac patients". The European Society of Veterinary Cardiology (ESVC) Meeting, Porto, Portugal. 2009

5. **Ohad D. "**Mean Electrical Axis: Telling Normal from Deviated in Just a Quick Glance"**.** American College of Internal Veterinary Medicine Forum Workshop, Anaheim, CA, USA. 2010

6. **Ohad D**. "Animal Electrocardiographic Studies in Safety Pharmacology Studies: What Can Be Done to Optimize Risk Assessment of QT-Interval Prolongation Related Liability". 3 hours long lecture, Teva Pharmaceutical Industries, Petah-Tikva, Israel, 2013.

7. **Ohad D.** "Sedation and Anaesthesia For Pets with Cardiac Disease". WSAVA Congress, Cape Town, South Africa, 2014.

8. **Ohad D.** "Emergency Cardiovascular Medicine". WSAVA Congress, Cape Town, South Africa, 2014.

9. **Ohad D.** "NTproBNP as a diagnostic Tool". WSAVA Congress, Cape Town, South Africa, 2014.

10. **Ohad D.** "Congenital heart disease in pets: diagnosis and management". A two-day long lecture series at the Bulgarian Association of Veterinary Cardiology annual meeting; 26-27, 2015

6.1.2 Other lectures (oral presentations)

1. **Ohad D.** and Hamlin R. Mensuration of thoracic radiographs from dogs before and three months after production of mitral regurgitation. The 9th Annual Forum of the American College of Veterinary Internal Medicine, New Orleans, May 1991.
2. Eldar M, **Ohad D.**, Swanson DK, Cordis TF, Vered Z, and Battler A. Use of percutaneous multielectrode "basket" catheter for endocardial recording and pacing in the swine left ventricle. Abstract presented at: The 15th Annual Scientific Sessions of the North American Society of Pacing and Electrophysiology, Nashville, May 1994. Also published in: *Pacing and Clinical Electrophysiology* (*PACE*). 1994; 17:4(ii), 826.
3. **Ohad D.**, Vered Z, and Eldar M. Echocardiographic guidance of radio-frequency ablation and multielectrode mapping catheters, in the swine left ventricle. Presented at: The Annual Meeting of the Israel Heart Society, Tel-Aviv, April 1994. Abstract presented at: The Meeting of the European Society of Cardiology, Amsterdam, 1995. Also presented at: The Scientific Session of The 68th American Heart Association, Anaheim, California, November 1995.
4. **Ohad D.**, Fitzpatrick AP, Smith MF, Whayne J, Vered Z, Rotstein Z, Cordis T, Swanson DK, Lesh MD, Scheinman MM, Greenspon AJ, and Eldar M. Multielectrode

endocardial mapping during ventricular tachycardia in swine.
Presented at: The Annual Meeting of the Israeli Subsection of the International Society for Heart Research, the Technion, Haifa, April 1995.
Presented at: The XV World Congress of the International Society for Heart Research, Prague, July 1995. Presented at: The American Heart Association, the 68th Scientific Session, Anaheim, California, November 1995. Published in: *Journal of Molecular and Cellular Cardiology*. 1995; 27(6): A-191

5. **Ohad D.**, Goldberger J.J., Rotstein Z., and Eldar M. Endocardial mapping and ablation of ventricular tachycardia in the closed-chest pig model using a multielectrode catheter. Abstract presented at: The 16th Annual American College of Veterinary Internal Medicine Forum, San Diego, CA, May 1998.
6. **Ohad D,** Hirschberg S, and Bdolah-Abram T. Spontaneous Feline Cardiomyopathy as a Model for Diastolic Heart Failure (DHF): Is Color M-Mode Trans-Mitral Flow Propagation Velocity Sensitive Enough**?** European College of Veterinary Internal Medicine - Companion Animals Congress, Glasgow, Scotland, September 2005.
7. **Ohad DG**, Koffas H, Bdolah-Abram T, Dukes-McEwan J, Corcoran B, French A, Sarit Hirschberg S, Simpson K. Imaging of Early Diastolic Inflow in Health and Disease in 76 cats. American College of Veterinary Internal Medicine Forum, Seattle, June 2007.
8. **Ohad DG**, Lenchner I, Bdolah-Abram T. Can a loud right apical murmur predict the diagnosis of pulmonary hypertension? American College of Veterinary Internal Medicine Forum, San Antonio, June 2008.
9. **Ohad D**, Sinay Y, Zaretsky A, and Shofti R. Chronic vagal stimulation can achieve ventricular rate control in spontaneously occurring canine atrial fibrillation. European College of Veterinary Internal Medicine - Companion Animals Congress, Ghent, Belgium, September 2008.
10. **Ohad D**, Avrahami A, David L. Congenital subaortic stenosis and tricuspid dysplasia in a cohort of 13 Dogue de Bordeaux dogs in Israel. European College of Veterinary Internal Medicine - Companion Animals Congress, Porto, Portugal, September 2009.
11. **Ohad D**, Berkowitz J. Is the Cardio-Renal-Anemia Syndrome Prevalent in Dogs? American College of Veterinary Internal Medicine Forum, Anaheim, CA, USA, June 2010.
12. Rishniw M, **Ohad D**, Porciello F, Ljungvall I, Häggström J. Sleeping respiratory rates in dogs and cats without observable cardiac disease. European College of Veterinary Internal Medicine - Companion Animals Congress, Toulouse, France, September 2010.
13. Veloso GF, **Ohad DG**, Francis AJ, Vaughan JM, Brownstein DG, Culshaw G, Vale WW, French AT, and Jamieson PM. Expression of urocortins in canine myocardium and plasma levels in dogs with cardiac disease. Forum of the American College of Veterinary Internal Medicine-Companion Animals, Anaheim, California, USA, June 2010.
14. Rishniw M, **Ohad D**, Ljungvall I, Porciello F, Häggström J. Sleeping and resting respiratory rates in dogs with subclinical heart disease. American College of Veterinary Internal Medicine Forum, Denver, CO, USA, June 2011.
15. **Ohad D**, Segev Y, Bdolah-Abram T, Klainbart S. Does the addition of constant rate infusion to bolus furosemide administration to hospitalized pets with acute congestive heart failure alter medical outcome? Congress of the European College of Veterinary Internal Medicine-Companion Animals, Seville, Spain, September 2011.

6.1.3. Posters:

Ohad D, Hirschberg S, and Bdolah-Abram T. Spontaneous Feline Cardiomyopathy as a Model for Diastolic Heart Failure (DHF): Is Color M-Mode Trans-Mitral Flow Propagation Velocity Sensitive Enough**?** The Annual Meeting of the Israeli Subsection of the International Society for Heart Research, the Technion, Haifa, April 2005.

6.2. Local conferences

6.2.1 Invited lectures:

2003	The decision making process regarding the onset of pharmacotherapy of canine degenerative valve disease, 3 hours, 50 attendees, invited by the Israeli Small Animal Medicine Association.
2005	Introduction to Animal Echocardiography in the Present Millennium, 2 hours, 45 attendees, invited by The 29th Israeli Symposium of Veterinary Medicine.

6.2.2. Other lectures (oral presentations)

1. **Ohad D**., Varda-Bloom N, Battler A, and Eldar M. Slowing of ventricular tachycardia rate in the swine. Presented at: The Annual Meeting of the Israel Heart Society, Tel-Aviv, 1994. Abstract presented at: The IX Annual Meeting of the Israeli Subsection of the International Society or Heart Research, Petach-Tikva, May 1994.
2. **Ohad D.**, Bor A, Varda-Bloom N, Swanson DK, Battler A, and Eldar M. A closed chest pig model of sustained ventricular tachycardia.
   Abstract presented at: The Annual Meeting of the Israel Heart Society, Tel-Aviv, April 1994. Also presented at: The IX Annual Meeting of the Israeli Subsection of the International Society for Heart Research, Petach-Tikva, May 1994.
3. **Ohad DG**, Lenchner I, Bdolah-Abram T. The involvement of systolic right apical murmurs in spontaneous canine pulmonary hypertension. The Annual Meeting of the Israeli Subsection of the International Society for Heart Research, Hadassah Ein Kerem, Jerusalem, April 2008.
4. **Ohad D**G, Sinay Y, Carmi B, Zaretsky A, and Shofti R. Chronic Vagal Stimulation for Ventricular Rate Control in a Dog with Atrial Fibrillation. The 32nd Israeli Symposium of Veterinary Medicine, Beit Dagan, Israel, 2008.
5. **Ohad DG**, Baruch S. Rubin G, Perl S. Incomplete atrio-ventricular canal" complicated by cardiac tamponade and bi-directional shunting in an adult dog. The 33rd Israeli Symposium of Veterinary Medicine, Beit Dagan, Israel, 2009.
6. **Ohad DG.** Congenital subaortic stenosis and tricuspid dysplasia in a cohort of 13 Dogue de Bordeaux dogs in Israel. The 34th Israeli Symposium of Veterinary Medicine, Beit Dagan, Israel, 2010.
7. **Ohad DG**. Sleeping respiratory rates in healthy dogs and cats. The 35th Israeli Symposium of Veterinary Medicine, Beit Dagan, Israel, 2011.
8. **Ohad DG**. Home environment sleeping and resting respiratory rates in dogs with stable

heart disease. The 36th Israeli Symposium of Veterinary Medicine, Beit Dagan, Israel, 2012.

9. **Ohad DG.** Home environment sleeping and resting respiratory rates in dogs with subclinical left-sided heart disease. The 376th Israeli Symposium of Veterinary Medicine, Beit Dagan, Israel, 2014.

6.2.3 Posters

1. **Ohad D**, Hirschberg S, and Bdolah-Abram T. The potential of color Doppler measurement of early trans-mitral flow propagation velocity as a sensitive diagnostic marker for feline cardiomyopathy. The Israeli Subsection of the International Society of Heart Research Meeting, Haifa, February 2005.

6.3. Other lectures - seminars and continuing education lectures (invited)

2003	Advanced Veterinary Internal Medicine for General Practitioners and Referring Veterinarians; Small Animal Cardiology (Physical Examination, Electrocardiography, Doppler Echocardiography); 9 hours, 60 attendees. Other teachers in this course: Drs. Aroch, Bark, Baneth, Dank, Eisenberg, Epstein, Harrus, Lavy, Ofri, Shamir, Shub, Tovi, and Zur.
2003, 2004	The mean electrical axis of the ventricular depolarization process in animals, 3 hours, 30 attendees, invited by Biogal Ltd. as a part of a continuing education lecture series.
2005	Introduction to Animal Doppler Echocardiography, 2 hours, 35 attendees. invited by Biogal Ltd. as a part of a continuing education lecture series.
2005	Clinical Veterinary Cardiology Course of 5 hours for 50 general practitioners, Larnaka, Cyprus.
2006	National Continuing Education Course for Private Practitioners: Clinical Veterinary Cardiology of 16 hours for 174 general practitioners, Tel-Aviv.
2007	Clinical Veterinary Cardiology Course for 170 general practitioners, 9 hours, Limassol, Cyprus.
2009	Clinically-Relevant Cardiovascular Electrophysiology, Intramural Continuing Education Lecture, 40 attendees, 3 hours.
2009	The positive inotropic and vaso-dilating mechanisms of actions of Pimobendan, Intramural Continuing Education Lecture, 40 attendees, 2 hours.
2010	The role of biomarkers in decision making in veterinary cardiac cases, Intramural Continuing Education Lecture, 40 attendees, 2 hours.
2011	Venous congestion, more than reduced cardiac output, triggers renal dysfunction in cardiac patients. Intramural Continuing Education Lecture, 30 attendees, 1 hour.
2013	Introduction to electrocardiography. A nationwide webinar of 3.5 hours, attended by 150 viewers (http://www.vets.org.il/%D7%95%D7%95%D7%91%D7%99%D7%A0%D7%A8-%D7%90%D7%A7%D7%92-%D7%A7%D7%A8%D7%93%D7%99%D7%95%D7%9C%D7%95%D7%92%D7%99%D7%94-%D7%95%D7%98%D7%A8%D7%99%D7%A0%D7%A8%D7%99%D7%AA.html)

2014	10 hours of cardiology teaching to veterinary students and practitioners (physical examination, electrocardiography, emergency cardiology, echocardiography)), Ljubljana, Slovenia (invited by the European Union)
2016	How Can Electrocardiography Assist Our Clinical Diagnostic & Therapeutic Decision Making Process? A nationwide webinar of 2 hours, attended by 180 clinicians. (http://www.vets.org.il/%D7%95%D7%95%D7%91%D7%99%D7%A0%D7%A8-%D7%90%D7%A7%D7%92-%D7%A7%D7%A8%D7%93%D7%99%D7%95%D7%9C%D7%95%D7%92%D7%99%D7%94-%D7%A4%D7%A2%D7%A0%D7%95%D7%97-2.html)
2017	The pros and cons of using electrocardiography at the veterinary practice. An intramural Continuing Education Lecture, 4 hours, 280 attendees.
2017	6 hours of continuing education in cardiac emergency at the Cluj-Napoka University, Rumania.
2018	6 hours of continuing education in pulmonary hypertension and basic echocardiography workshop at Vets Central, Hong Kong, 2018.
2018	16 continuing education in feline cardiology in front of 600 veterinarians, Taipei, Taiwan.
2019	3 continuing education hours about physical examination techniques involved in detecting heart disease in general and pulmonary hypertension in particular, Aristotle University of Thesalloniki Veterinary Medical School, Greece, May 2019.
2019	6 continuing education hours about physical examination and electrocardiography, Inanda Veterinary Hospital & Specialist Referrals, Durban, South Africa.
2019	Two hours about cardiac emergency medicine at the 2nd Annual Inanda Veterinary Symposium Masterclass (registration number AC/2067/19), Durban, South Africa.
2019	6 hours of continuing education in cardiac emergency and Introduction to echocardiography at Iasi University, Rumania.

7. Patents

A Joint Applicant of "**Security System**" (a device designed to non-invasively and continuously monitor physiological parameters from conscious working animals and provide an alert when their well-being is compromised), Israeli Patent Application **#160748**, submitted March 4, 2004; USA Application 2005/0197546 A1, submitted September 8, 2005. Eitan Mardiks (PI), Dan Ohad (C), Joseph Bezalel (C).

Scientific Biography

I am a clinical specialist and devoted most of my career so far to understanding, teaching, and studying diagnostic and therapeutic modalities of diseased mammalian hearts.

Upon graduation from the Koret School in 1991, I pursued a PhD program in applied cardiac electrophysiology, investigating an experimental, large-animal model of human, post-myocardial-infarction malignant ventricular tachycardia. Once this model was established we used it to develop a novel intra-cardiac electrical mapping system, which facilitated accurate and effective radio-frequency ablation of arrhythmia foci. The fruits of this PhD project have been published in the human cardiology literature (see Section 5A, publications #4, #11, #13, #14, and #15).

I then embarked on a two-year long clinical veterinary cardiology residency program, followed by a one year fellowship, at the University of Pennsylvania, following which study #5A18 was published, which described the electrocardiographic impact of Tricyclic antidepressant therapy in dogs.

Upon completion of this 3-year clinical training program, I worked as a Research Scientist at a large pharmaceutical firm. The company for publication (#5A22) approved only selected data from my work, while most of my scientific work there was not publishable due to proprietary reasons.

Case Reports

1. I described a unique case of post parturient paresis in a hypocalcemic, hypomagnesemic bitch in which the ratio of the ionized fractions of magnesium and calcium was reversed compared to that in the usual condition in canine post-parturient hypocalcemia (Case Report #1).
2. I published a case report interpreting the unique findings of a congenital incomplete atrioventricular canal complicated by cardiac tamponade in an adult dog (Case Report #2).
3. Another paper (#5A23), elaborating the rational behind, and reporting for the first time the successful implementation of artificial chronic vagal stimulation for continuous ventricular rate control in atrial fibrillation, was published in 2008 (Case Report #4). It set the stage for future antegrade vagus stimulation for the benefit of both veterinary and human patients with supra-ventricular tachyarrhythmia, where pharmacotherapy is intolerable, ineffective, or contraindicated.
4. I oversaw the management of and co-authored a case report describing the disease course, pathophysiology, diagnosis, and outcome of the first described traumatic urothorax in a dog, which was recently accepted for publication at the Journal of Small Animal Practice (Case Report #5).
5. I co-authored and mentored the process of diagnosis and reporting by Rumanian colleagues of a unique case report describing several congenital heart defects in a patient (Case Report #8)

6. I led and co-authored the first description of successful amiodarone administration in a cat (Case Report # 10).

Completed Research Projects

1. A project I co-authored (#5A26) was based on collaboration with researchers from the University of Edinburgh, as well as from the Salk Institute for Biological Studies in the USA. This work described, for the first time, the sequences of canine urocortin peptides, their distribution, and that of their receptor in canine hearts. Urocortins are considered potent regulators of cardiovascular functions. Some of them are under development as therapeutic agents in heart failure. We described their intracellular location and have demonstrated the presence of circulating urocortins in dog plasma.
2. Another published project (#5A25) involved the molecular identification of two different zoonotic Bartonella species in cardiac valves from dogs that died from acquired infective endocarditis. This was the first molecular identification of any of theses two specific Bartonella species from valves of dogs with canine infective endocarditis, and the first report of one of these two species in dogs in general.
3. I have been deeply involved in data generation and interpretation, and in co-authoring a clinical research project looking at cardiac manifestations of snakebites in dogs (#5A24). Cardiac arrhythmias and increased cardiac troponins were prevalent among envenomed victims, and troponin levels correlated with cardiac arrhythmia severity.

My other clinical research interests focus mostly on the following:

A. The mode of inheritance of two congenital heart diseases (Subaortic Stenosis and Tricuspid Valve Dysplasia) in the Dogue de Bordeaux (DdB) breed (#5A28). I have led an effort to demonstrate an autosomal recessive mode of inheritance based on pedigree analyses from 13 partially related dogs. This project was recently published at The Veterinary Journal. Future genetic analysis will be performed using frozen blood samples, still being collected from both sick and healthy DdB dogs in an attempt to identify genetic differences between these two DdB populations. If successful, this may serve to identify specific disease-related genes in other, non-DdB canine breeds, as well as in the entire canine species.
B. Acquired pulmonary hypertension secondary to left-sided heart disease (#5A30). Statistical analysis of data from 201 dogs demonstrated that anamnesis and physical examination alone (e.g., a loud right apical systolic murmur combined with peritoneal effusion and/or with syncope) is associated with the diagnosis of canine pulmonary hypertension, as confirmed later by Doppler echocardiography. This may facilitate earlier intervention to prevent life-threatening complications in a large patient population that is currently under-diagnosed. This project was led by me and was published at the Veterinary Journal.
C. Cardio-renal interactions in sick pets. Data from 223 dogs with heart disease were compared to those from 248 non-cardiac dogs with no renal dysfunction. The mean creatinine levels in the study group were lower than those in the control group were but remained within normal range. The prevalence of anemia among the cardiac study group was surprisingly lower than that in the control group, leading to the conclusion that impaired renal function and anemia are not

very common in canine patients with heart disease, when compared to people. Prior to submission for publication, I plan to investigate these same questions in feline patients, where results are expected to be very different.

D. Non-invasive imaging of diastolic function and dysfunction of the heart (#6.1.2.7 & #6.1.3). This field is becoming increasingly important in human cardiology. Spontaneously occurring heart disease in cats can serve as an excellent model thereof. I defined cut-off points in, and a rank-order of quality between several echocardiographic parameters based on statistical analysis of data from 76 cats. Both relaxation-related and compliance related parameters were meaningfully different between healthy and sick cats.

<u>On-going and Future Research</u>

1. For the past 7 years, I have been collaborating with veterinary cardiologists from the USA, Italy, the United Kingdom and Sweden. We have been gathering and analyzing respiratory-rate data from healthy dogs and cats in their home environments.. We sought to provide pet-owners and clinicians with a practical tool for identifying the early development of sub-clinical trends of change (rather than only attempting to identify a sudden, and sometimes too late an exception beyond a certain threshold value) in these parameters. Such trends are expected to develop as one of the earliest clinical signs of congestive heart failure (CHF), prior to other, overt symptoms. These tools enable earlier detection and thereby, earlier medical reaction to this syndrome, with better outcome. Partial data from hundreds of healthy, as well as from subclinically sick dogs and cats have been presented internationally and nationally, and were also published at Research in Veterinary Science, Journal of Veterinary Medical Association, and Journal of Feline Medicine and Surgery (#5A: 27, 29, & 31). We plan to further investigate such trends of change in both unstable, sick animals, and in animals that have been diagnosed with CHF and were then stabilized medically, to help ascertain stability over time in their own home environment, and to identify early destabilization when they still appear aclinical. This concept is novel and has never been reported before, and is expected to promote better quality of life to both veterinary patients AND their owners.
2. By collaborating with this same international group, while analyzing data from 578 dogs, I have been able to demonstrate (#5A32) that murmur intensity in small-breed dogs with myxomatous mitral valve disease reflects both clinical and echocardiographic disease severity. The probability of a dog having congestive heart failure or pulmonary hypertension was shown to increase with increasing murmur intensity. Soft murmurs were strongly indicative of subclinical heart disease, while "thrilling" murmurs were associated with more severe disease. This concept, too, while potentially intuitive, was not scientifically supported before and proved helpful for clinicians when attempting to perform risk stratification of dogs with this common disease. We plan to explore this concept in dogs with other heart diseases and in cats with cardiomyopathy.
3. Future research projects I plan to develop and bring to publication include the use of serum cardiac troponin T in the diagnosis of pets with heart disease; developing a non-invasive screening test to identify pets at risk of developing congestive heart failure due to intravenous fluid therapy prior to its administration; elucidating the reasons behind and the risk factors for developing acquired valve disease with a decreased systolic

pressure gradient; and the impact of pimobendan therapy on specific spectral Doppler measures of pulmonary arterial hypertension, secondary to canine degenerative mitral valve disease.